



**2025-2026  
Catalog**

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WELCOME TO CLARK STATE



Welcome

Clark State offers many degree and certificate options that result in high-wage, high-demand careers, as well as a general education curriculum that will transfer to most four-year universities.

We are proud of our dedication to student success at Clark State and this catalog should help you learn more about the programs and services we offer, as well as how to get involved in campus activities.

If there is anything you should need during your time here at Clark State, please do not hesitate to contact my office. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jo Alice Blondin'. The signature is fluid and cursive, with a large, stylized 'J' and 'B'.

Jo Alice Blondin, Ph.D.  
President

This Catalog was prepared prior to the 2025 - 2026 academic year for informational purposes only. The educational programs are changed whenever it is necessary to stay abreast of rapid changes in technology and our world. Clark State reserves the right to alter or amend any item contained herein without notice. We encourage you to consult with your advisor or the appropriate college official for confirmation of matters that are essential to your program of study.

Clark State College does not discriminate on the basis of race, color, religion, gender/sex, gender identity or expression, national origin (ancestry), military status, disability, age (40 years of age or older), genetic information, sexual orientation, status as a parent during pregnancy and immediately after the birth of a child, status as a parent of a young child or status as a foster parent and any other protected group status as defined by law or college policy in its educational programs, activities, admissions or employment practices as required by Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act and other applicable statutes.

In accordance with the Americans with Disabilities Act, it is the policy of Clark State to provide reasonable accommodations to persons with disabilities. If you require disability-related accommodations, please contact the Office of Accessibility at 937-328-6019.

Please address correspondence to Clark State, Post Office Box 570, Springfield, Ohio 45501 or telephone 937-325-6028.

## ABOUT CLARK STATE

Whether students have chosen Clark State because of our small class sizes, devotion to quality education, affordability or exceptional variety of programs, we're glad they did. The following information tells more about Clark State and how it evolved into the progressive learning institution it is today. It will also give valuable insight into our mission and how we can help students achieve their academic goals.

### History of the College

Clark State College began in 1962 as the Springfield and Clark County Technical Education Program in an effort to meet the post-secondary, technical education needs of Springfield and the surrounding area. In 1966, the name was changed to Clark County Technical Institute and was chartered by the Ohio Board of Regents as Ohio's first technical college. In 1972, CCTI had grown to 1,000 students and officially became Clark Technical College.

By 1985, Clark Technical College had developed one of the broadest general education programs of any technical college in the state. Due to this solid foundation complete with robust technical programs, in 1988, the Ohio Board of Regents approved the change of Clark Technical College to Clark State Community

College. Following this name change, Clark State added associate of arts and associate of science degrees to the approximately 30 technical associate degrees and certificates it had offered for years.

Today, Clark State is home to three campus locations in Springfield, the main campus on Leffel Lane, the Brinkman Education Center on South Limestone Street and the fire school located in the Springfield Fire Station on South Limestone Street, as well as a Conference Center and Performing Arts Center on Fountain Avenue in downtown Springfield. Clark State also offers a location in Beavercreek, which opened in 2007. In 2008, Clark State opened the Bellefontaine location on the campus of Ohio Hi-Point, offering nursing classes and a state-of-the-art diesel lab. In 2019, the most recent location in Xenia opened its doors.

Also in 2019, the Ohio Department of Higher Education and the Higher Learning Commission approved the addition of Clark State's first bachelor of science degree in manufacturing technology management, followed by bachelor's offerings in web design and development, manufacturing technology management, addiction studies and, coming in fall 2025, nursing. These additions led the Clark State Board of Trustees to change the name of the institution to encompass the advancements in educational opportunities made by the college, officially becoming Clark State College in 2021.

### Mission

To engage and empower diverse learners by providing high-quality educational programs and services that emphasize student and community success.

### Vision

Clark State College will be the leader in education by partnering with our communities, businesses and industries while achieving the highest levels of student success within a culture that provides intellectual, personal and professional growth.

### Guiding Principles

We believe in the transformative power of education through:

#### 1. Learning

We use best practices and resources to create a learning community that challenges, transforms and empowers students and employees.

#### 2. Community

We value, trust and support people with whom we work and serve.

#### 3. Partnerships

We collaborate to address stakeholder needs and contribute to the economic and holistic well-being of society.



#### 4. Innovation

We champion an environment that encourages creativity and embraces change.

#### 5. Diversity

We welcome and engage all individuals to create an equitable and inclusive culture.

## ASSESSMENT OF STUDENT ACADEMIC ACHIEVEMENT

### Improving Student Learning

The Board of Trustees, faculty and staff affirm that student learning is at the core of our purpose as a college. The ability to measure learning accomplishes two purposes: it allows us to demonstrate our accountability to our various publics, but more importantly, it provides us with the capacity to impact and improve the degree of learning that goes on in our college. The college has developed a plan to assess student academic achievement in accordance with the requirements of the Higher Learning Commission. The plan ensures the college has specific learning outcomes for each of its degree programs and validates that students earning degrees have achieved those outcomes. Validity measures include instructor assessment, certification examinations, national standard examinations, employer surveys, success of student transfer and evaluations by external professionals. The results of the assessment efforts are used to improve instruction as necessary to guarantee that our students can succeed in the workforce or in further education.

### Facilities

Clark State's main campus location is in Springfield, Ohio. Clark State also has satellite locations in Beavercreek, Bellefontaine, Xenia and in various high schools and career technology centers in the region. The Springfield campus has two locations: the Leffel Lane campus at 570 E. Leffel Lane, situated on the southern border of Springfield just north of Interstate 70 and the downtown campus located in the heart of downtown Springfield. Major city streets and city bus service provide easy travel between campuses. The Clark State Greene Center is located in Beavercreek at 3775 Pentagon Blvd. The Clark State satellite location in Bellefontaine is on the campus of Ohio Hi-Point Career Center at 2280 State Route 540. The Clark State location in Xenia is located at the YMCA at 334 Progress Drive.

### Online Learning

Online learning at Clark State offers alternative modes of instructional delivery for students who, for a variety of reasons, may not be able to attend traditionally scheduled classes. Clark State offers over 250 online and hybrid courses. In online courses, all instructional and lab activities are completed in an online environment. Online courses require no visits to campus; however, students may be required to use a proctored testing facility. Online synchronous courses provide students flexibility of

location with classroom instruction delivered through an online platform. Attendance is required during scheduled class times, but students are not required to go to a physical location. Hybrid courses combine the elements of the traditional, face-to-face classroom with online instruction. These hybrid courses require attendance at scheduled sessions on campus or at clinical locations for lectures, labs or clinical experiences. The time spent on campus is generally 50 percent less than for traditional courses; the remainder of the time is spent in the online asynchronous environment. The college also offers directed learning courses. Directed learning courses are self-paced courses except that class work must be completed on Clark State's campus using the directed learning lab and its resources.

Through these alternative modes of instructional delivery, accredited courses are more accessible, providing students with a convenient way to complete their degrees. Students enroll and progress through their courses following an established calendar of assignments. As long as they meet the established deadlines for contributions in their fully online courses, students can participate at times convenient for them. Online courses and programs have full approval from the Higher Learning Commission. It is recommended that students interested in online or hybrid coursework take the Blackboard online tutorial. Access can be requested through the Student Success Center and helps students determine their readiness and potential for success in an online learning environment.

### Accreditations/Approvals

Clark State College is accredited by the Higher Learning Commission, 230 S. LaSalle Street, Suite 7-500, Chicago, Illinois 60604, 1-800-621-7440.

The real-time court reporting program is approved by the National Court Reporters Association, 8224 Old Courthouse Road, Vienna, Virginia 22182-3808, 703-556-6272.

The early childhood education program is approved by the Ohio Department of Higher Learning for Pre- Kindergarten Associate Licensure, 25 S. Front Street, Columbus, Ohio 43215, 877-644-6338.

The registered nursing program is approved by the Ohio Board of Nursing, 17 S. High Street, Suite 660, Columbus, Ohio 43215-3466, 614-466-3947, [www.nursing.Ohio.gov](http://www.nursing.Ohio.gov) and accredited by the Accreditation Commission for Education in Nursing, Inc., 3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, 404-975-5000, [www.acenursing.org](http://www.acenursing.org).

The practical nursing program is approved by the Ohio Board of Nursing, 17 S. High Street, Suite 660, Columbus, Ohio 43215-3466, 614-466-3947, [www.nursing.Ohio.gov](http://www.nursing.Ohio.gov).

The medical assisting certificate program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 25400 U.S. Highway 19 N., Szte. 158, Clearwater, Florida 33756, 727-210-2350, [www.caahep.org](http://www.caahep.org) upon recommendation of the Medical Assistant Education Review Board (MAERB).

The medical laboratory technology program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences, 5600 N. River Road, Suite 720, Rosemont, Illinois 60018, 773-714-8880, [www.naacsls.org](http://www.naacsls.org).

The paramedic program (#308-Ohio) is accredited by the Ohio Department of Public Safety Services, Division of Emergency Medical Services, 1970 W. Broad Street, Columbus, Ohio 43218-2073, 800-233-0785 and by the Commission on Accreditation of Allied Health Education programs, 25400 U.S. Highway 19 N., Ste. 158, Clearwater, Florida 33756, 727-210-2350, upon recommendation of the Committee on Accreditation for the Emergency Medical Services Profession (CoAEMSP).

The physical therapist assistant program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, 3030 Potomac Ave., Ste. 100 Alexandria, Virginia 22305, 703-706-3245, [www.captionline.org](http://www.captionline.org), e-mail: [accreditation@apta.org](mailto:accreditation@apta.org).

The firefighter program (#308-Ohio) is accredited by the Ohio Department of Public Safety Services, Division of Fire Services, 1970 W. Broad Street, Columbus, Ohio 43218, 800-233-0785.

## DEGREES

Our degree programs are designed as two and four-year programs provided students attend Clark State on a full-time basis. Many of our students, however, take longer than two or four years to complete degree requirements. Although many courses from the technical programs are transferable, these programs are designed primarily as pre-employment programs. The following degrees are offered:

- Associate of Arts (AA)
- Associate of Science (AS)
- Associate of Applied Business (AAB)
- Associate of Applied Science (AAS)
- Associate of Technical Studies (ATS)
- Bachelor of Applied Science (BAS)

### Agriculture

Agricultural Business	AAB
Agricultural Business - Agricultural Engineering Technology Option	AAB
General Transfer - Agriculture Pathway	AS
Horticulture Industry	AAS
Precision Agriculture	AAS
Precision Agriculture - Technician Option	AAS

### Bachelor's Degrees

Addiction and Integrated Treatment Studies	BAS
Manufacturing Technology Management - Manufacturing Engineering Technology Concentration	BAS
Manufacturing Technology Management - Computer Aided Design Concentration	BAS
Manufacturing Technology Management - Industrial Technology Concentration	BAS
Manufacturing Technology Management - Mechanical Engineering Technology Concentration	BAS
Web Design and Development - Web Design Concentration	BAS
Web Design and Development - Web Development Concentration	BAS

### Business

Accounting	AAB
Business Transfer - Central State University	AS
Business Transfer - Wright State University	AS
General Transfer - Business Pathway	AS
Judicial Court Reporting	AAB
Management	AAB
Management - Human Resource Management Option	AAB
Management - Logistics and Supply Chain Management Option	AAB
Management - Marketing Option	AAB

Management - Real Estate Broker Option	AAB	Occupational Therapy Assistant (Consortium Program)	AAS
Office Administration	AAB	Office Administration - Medical Office Administration Major	AAB
Legal Studies	AAS	Physical Therapist Assistant	AAS
Professional Services Management	ATS	Radiographic Imaging (Consortium Program)	AAS

## Computer and Information Technology

Computer Networking	AAB	Registered Nursing	AAS
Computer Networking -Technical Systems Support Option	AAB	Registered Nursing - Evening-Weekend	AAS
Computer Software Development	AAB	Registered Nursing - LPN to RN Transition	AAS
Computer Software Development - Cybersecurity Option	AAB	Registered Nursing - Paramedic to RN Transition	AAS
Computer Software Development - Web Development Option	AAB	Advanced Standing Registered Nursing	AAS
Cybersecurity	AAS	Advanced Standing Registered Nursing - LPN to RN Transition	AAS
Information Services: Library Paraprofessional	AAS	Respiratory Care (Consortium Program)	AAS
Modeling and Simulation Engineering Technology	AAS		

## Social Sciences/Human Services and Public Safety

General Transfer - Social Services Pathway	AA
Addiction and Recovery Services	AAS
Criminal Justice Technology - Corrections Concentration	AAS
Criminal Justice Technology - Law Enforcement Concentration	AAS
Emergency Medical Services	AAS
Social Services Technology	AAS
Social Work Transfer - Wright State University	AA

## Digital Arts

Graphic Design	AAB
New Media	AAB
New Media - Web Design Option	AAB

## Education

Early Childhood Education	AAS
Teacher Education Transfer	AA

## Engineering, Manufacturing and Mechanical Services

Computer-Aided Design Technology	AAS
Diesel Technology Program (Ohio Hi-Point)	ATS
Heating, Ventilation, Air Conditioning and Refrigeration (Clark County CTC)	ATS
Industrial Technology	AAS
Manufacturing Engineering Technology	AAS
Manufacturing Engineering Technology - Laser Machining Option	AAS
Manufacturing Engineering Technology - Laser Maintenance Option	AAS
Mechanical Engineering Technology	AAS

## Health

Healthcare Concentration Transfer	AA
Healthcare Concentration Transfer	AS
Health Sciences	AAS
Diagnostic Medical Sonography	AAS
Medical Assisting	AAS
Medical Laboratory Technology	AAS
Multi-Skilled Healthcare	ATS

## Theatre

Entertainment Technology	AAS
General Transfer - Theatre Pathway	AA

## Transfer Pathways

General Transfer	AA
General Transfer - Communication Pathway	AA
General Transfer - English Pathway	AA
General Transfer - Geography Pathway	AA
General Transfer - History Pathway	AA
General Transfer - Political Science Pathway	AA
General Transfer - Psychology Pathway	AA
General Transfer - Sociology Pathway	AA
General Transfer	AS
General Transfer - Biology Pathway	AS
General Transfer - Economics Pathway	AS
General Transfer - Geology Pathway	AS
General Transfer - Mathematics Pathway	AS
General Transfer - Physics Pathway	AS
General Transfer - Psychology Pathway	AS
General Transfer - Social Work Assistant	AAS
Social Work Transfer - Wright State University	AA

## Associate of Technical Studies

Clark State also offers an associate of technical studies degree if a student's career needs are not met by one of our technical degrees. The flexibility of this program permits students to work with an advisor to construct an inter-disciplinary degree program from present course offerings. To pursue an associate of technical studies, students need to apply prior to completing 40 credit hours. Students can apply at any academic school office.

## GENERAL EDUCATION

General education is the body of common knowledge, concepts and attitudes essential to functioning effectively in a complex, diverse and changing world. Through a variety of academic programs, students develop and refine intellectual virtues such as curiosity, open-mindedness and analytical judgment. Students also explore ideas, concepts, values, beliefs, social institutions and cultural experiences that create a foundation for civic awareness with traits such as public mindedness and an appreciation of the varieties of human existence.

Common Outcomes Required in Education (CORE) is Clark State College's philosophy of general education. CORE supports learners in their journey toward life-long fulfillment. Upon completion of a degree from Clark State, a graduate will be able to achieve competencies in the following:

Common Outcomes Required in Education (CORE)	
Writing	Write clearly and accurately in a variety of contexts and formats.
Speaking	Speak clearly and accurately in a variety of contexts and formats.
Reasoning	Use critical thinking and problem solving to draw logical conclusions.
Math and Logic	Use numerical data to solve problems, explain phenomena and make predictions.

Under leadership of the college's Assessment Committee, the faculty has established criteria and tools for assessing and reporting student achievement of these common outcomes in all academic programs.

## General Education Requirements for Technical Programs

Clark State students are required to complete courses that focus on the development of skills and knowledge in general education. These courses include requirements in written and oral communication, arts and humanities, social and behavioral sciences, mathematics and physical/ natural sciences.

Students in technical programs (AAB, AAS and ATS) take:

- English I, plus at least three additional credit hours in the area of oral and written communication;
- Three credit hours in mathematics; and
- Six credit hours from two of three categories including arts and humanities, social/behavioral sciences and natural/physical sciences.

## Global Awareness

Because of the importance of international events to our lives, we require each student to successfully complete one or more courses that emphasize global awareness. The number of classes varies with the degree being sought. Courses meeting this requirement are designated with a GA following each course. Unless specified in degree requirements, students registering for general education courses in technical programs should use the following list:

## Written and Oral Communication

COM 1110	Interpersonal Communication I (GA)
COM 1120	Public Speaking I
COM 1130	Introduction to Mass Communication
COM 1170	Small Group Communication
ENG 1112	English II
ENG 2211	Business Communication (GA)
ENG 2230	Technical Report Writing

## Arts and Humanities

ART 1001	Art History I (GA)
ART 1002	Art History II (GA)
ART 1300	Appreciation of the Arts (GA)
ASL 1111	Beginning American Sign Language, Course I (GA)
ASL 1112	Beginning American Sign Language, Course II (GA)
ENG 1600	Introduction to Literature (GA)
ENG 2300	Great Books: World Literature (GA)
ENG 2510	American Literature I
ENG 2520	American Literature II
ENG 2610	British Literature to 1800
ENG 2620	British Literature from 1800 to the Present
FRN 1111	French I (GA)
FRN 1112	French II (GA)
HST 1110	Western Civilization to 1600 (GA)
HST 1120	Western Civilization Since 1600 (GA)
HST 1210	American History to 1865 (GA)
HST 1220	American History Since 1865 (GA)
HST 1410	African American History to 1877 (GA)
HST 1420	African American History since 1877 (GA)
MUS 1130	Music Appreciation (GA)
PHL 2000	Critical Thinking
PHL 2100	Ethics (GA)
PHL 2300	Medical Ethics (GA)
PHL 2400	Philosophy of World Religions (GA)
SPN 1100	Survival Spanish (GA)
SPN 1111	Beginning Spanish, Course I (GA)
SPN 1112	Beginning Spanish, Course II (GA)
THE 1130	Theatre Appreciation (GA)
THE 1133	Script Analysis
THE 2241	Theatre History I (GA)
THE 2242	Theatre History II (GA)

## Social and Behavioral Sciences

ECO 1100	General Economics*
ECO 2210	Principles of Macroeconomics
ECO 2220	Principles of Microeconomics
GEO 1000	Introduction to GIS and Cartography (GA)
GEO 1100	Human Geography (GA)
GEO 2200	World Regional Geography (GA)
PLS 1100	Introduction to American Politics

PLS 1300	Introduction to Comparative Politics (GA)
PLS 2300	Introduction to International Relations (GA)
PSY 1111	Introduction to Psychology (GA)
PSY 2218	Introduction to Educational Psychology (GA)
PSY 2223	Lifespan Human Growth and Development (GA)
PSY 2230	Abnormal Psychology (GA)
RST 2700	Regional Studies: Africa (GA)
SOC 1110	Introduction to Sociology (GA)
SOC 2220	Comparing Cultures (GA)
SOC 2230	Social Problems (GA)
SOC 2240	Racial and Cultural Minorities (GA)
SOC 2270	Marriage and Family (GA)

\*ECO 1100 cannot be used as a general education elective in any program that requires ECO 2210 or ECO 2220.

## Mathematics and Physical/Natural Sciences

BIO 1105	Fundamentals of Anatomy and Physiology
BIO 1131	Microbiology
BIO 1410	Fundamentals of Biology
BIO 1420	Global Biology (GA)
BIO 1510	Biology I
BIO 1520	Biology II
BIO 2121	Anatomy and Physiology I
BIO 2122	Anatomy and Physiology II
CHM 1150	Introduction to General Chemistry
CHM 1210	General Chemistry I
CHM 1220	General Chemistry II
GLG 1131	Physical Geology
GLG 1132	Historical Geology
MTH 1070	Quantitative Reasoning
MTH 1060	Business Mathematics
MTH 1115	Industrial Calculations
MTH 1200	Technical Math for Agriculture
MTH 1280	College Algebra
MTH 1340	Pre-Calculus
MTH 2100	Calculus for the Management, Life and Social Sciences
MTH 2200	Calculus I
MTH 2220	Calculus II
MTH 2242	Multivariable Calculus
MTH 2430	Differential Equations
PHY 1100	Fundamentals of Physics
PHY 1501	General Physics I with Algebra
PHY 1502	General Physics II with Algebra
STT 2640	Elementary Statistics I
STT 2650	Elementary Statistics II



# GENERAL EDUCATION REQUIREMENTS FOR TRANSFER PROGRAMS

Clark State associate of arts (AA) and associate of science (AS) degree programs include the Ohio Transfer 36 (OT36). This collection of courses meets the general education requirements for transfer programs at Clark State and seamlessly transfers to public colleges and universities in Ohio. See additional information regarding the OT36 under the Transfer Guidelines section.

## Ohio Transfer 36 at Clark State

The OT36 requirements at Clark State include a total of 36 credit hours in general education areas that align with the state standards from the Ohio Department of Higher Education as indicated below.

OT36 Requirements	
Composition	3 Credits
Mathematics	3 Credits
Natural Sciences	6 Credits
Social and Behavior	6 Credits
Arts and Humanities	6 Credits
Additional Electives	12 Credits

Unless specified in the degree requirements, students registering for general education courses in transfer programs should take courses from the following list:

## English Composition

ENG 1111	English I	3
ENG 1112	English II	3

## Oral Communication

COM 1120	Public Speaking	3
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## Mathematics

MTH 1070	Quantitative Reasoning	3
MTH 1280	College Algebra I	4
MTH 1340	Pre-Calculus	5
MTH 2100	Calculus for Management, Life, and Social Sciences	5
MTH 2200	Calculus I	5
MTH 2220	Calculus II	5
MTH 2242	Multivariable Calculus	5
MTH 2430	Differential Equations	4
STT 2640	Statistics I	3

## Arts & Humanities

ART 1001	Art History I	3
ART 1002	Art History II	3
ART 1300	Appreciation of the Arts	3
ENG 1600	Introduction to Literature	3
ENG 2300	Great Books: World Literature	3
ENG 2510	American Literature I	3
ENG 2520	American Literature II	3
ENG 2610	British Literature to 1800	3
ENG 2620	British Literature from 1800 to the Present	3
HST 1110	Western Civilization to 1600	3

HST 1120	Western Civilization Since 1600	3
HST 1210	American History to 1865	3
HST 1220	American History Since 1865	3
HST 1410	African American History to 1877	3
HST 1420	African American History Since 1877	3
MUS 1130	Music Appreciation	3
PHL 2000	Critical Thinking	3
PHL 2100	Ethics	3
PHL 2300	Medical Ethics	3
PHL 2400	Philosophy of World Religions	3
THE 1130	Theatre Appreciation	3
THE 1133	Script Analysis	3
THE 2241	Theatre History I	3
THE 2242	Theatre History II	3

## Social and Behavioral Sciences

ECO 1100	General Economics	3
ECO 2210	Principles of Macroeconomics	3
ECO 2220	Principles of Microeconomics	3
GEO 1100	Human Geography	3
GEO 2200	World Regional Geography	3
PLS 1100	Introduction to American Politics	3
PLS 1300	Introduction to Comparative Politics	3
PLS 2300	Introduction to International Relations	3
PLS 2400	State and Local Politics	3
PSY 1111	Introduction to Psychology	3
PSY 2223	Lifespan Human Growth & Development	3
PSY 2230	Abnormal Psychology	3
RST 2700	Regional Studies: Africa	3
SOC 1110	Introduction to Sociology	3
SOC 2220	Comparing Cultures	3
SOC 2230	Social Problems	3
SOC 2240	Racial and Cultural Minorities	3
SOC 2250	Sociology of Poverty: Feminization of Poverty	3
SOC 2270	Marriage and Family	3

## Natural and Physical Sciences

BIO 1410	Fundamentals of Biology	4
BIO 1420	Global Biology	4
BIO 1510	Biology I	5
BIO 1520	Biology II	5
BIO 2121	Anatomy & Physiology I	4
BIO 2122	Anatomy & Physiology II	4
CHM 1150	Introduction to General Chemistry	4
CHM 1160	Introduction to Organic and Biological Chemistry	4
CHM 1210	General Chemistry I	5
CHM 1220	General Chemistry II	5
GLG 1131	Physical Geology	4
GLG 1132	Historical Geology	4
GLG 1133	Environmental Geology	4
PHY 1100	Fundamentals of Physics	4
PHY 1501	General Physics I with Algebra	5
PHY 1502	General Physics II with Algebra	5
PHY 2501	College Physics I with Calculus	5
PHY 2502	College Physics II with Calculus	5

More information on OT36 approved courses can be found on the Ohio Department of Higher Education website <https://transfercredit.Ohio.gov/initiatives-upd/Ohioio-transfer-36/Ohioio-transfer-36>.

## TRANSFER GUIDELINES

Students should determine the four-year college or university to which they will transfer and the prospective major as early as possible in the academic program. Request a catalog or curriculum from the prospective transfer institution early and become familiar with its admissions policies, scholarship options/ deadlines and degree requirements. Generally, students will receive credit for most of their courses at the transfer institution if they have worked carefully with a Clark State academic advisor and with personnel at the prospective transfer institution. The transfer institution, however, will make the final determinations.

A minimum of 60 semester credit hours is required to graduate with a Clark State associate of arts or associate of science degree. Work with an academic advisor and sign up for appropriate courses each term. The primary purpose of the AA and AS degree is to provide transfer credit to four-year colleges and universities. Students regularly transfer to other institutions in areas such as business, psychology, English, theatre, sociology, urban affairs, art, agriculture, education, engineering sciences and engineering technologies. Please see the college webpage at <https://www.clarkstate.edu/admissions/transferring-credits/> for more information about transfer and articulation agreements.

The Ohio Department of Higher Education offers a credit transfer tool at <https://transfercredit.Ohio.gov/students/student-programs/Credit-Transfer-Tool> for Ohio Transfer 36 (OT36), Transfer Assurance Guidelines (TAGS), Career Technical Assurance Guidelines (CTAGS), Industry-Recognized Credentials (ITAGS), Military Transfer Assurance Guides (MTAGS) and Advanced Placement (AP). This tool is meant to help students choose courses for a seamless transition to the transfer institution.

### Transfer to Clark State

Clark State College welcomes transfer students from accredited community colleges, technical colleges and four-year colleges and universities. In order for transfer credits to be evaluated, students need to first be admitted to Clark State. An official transcript need to be submitted from each college where credits were earned. Transcripts need to be sent directly to the Clark State Admissions office from the transfer institution or delivered in a sealed envelope from the transfer institution.

Prior to the receipt of a transcript evaluation, students are responsible for not duplicating courses for which they may obtain transferable credit.

When planning to transfer credits to complete an associate degree at Clark State or when planning to enroll in an occasional class to transfer back to your home institution, an official transcript from the originating institution is required: <https://www.clarkstate.edu/admissions/transferring-credits/>.

### Transfer from Clark State

To transfer credits seamlessly, please reference the articulation agreements and the Ohio Guaranteed Transfer Pathways that apply at the Clark State College website: <https://www.clarkstate.edu/admissions/transferring-credits/>.

### Ohio Guaranteed Transfer Pathways

Clark State College has transfer agreements with numerous four-year institutions that align with state pathways for students completing transfer (AA, AS) and/or technical (AAS, AAB) degrees. More details may be found at <https://transfercredit.Ohio.gov/students/student-programs/ogtp>

### Transferology

Transferology was developed as an online tool that serves as a gateway to participating institutions' transfer articulation systems. Information about the transferability of credit hours for Clark State and many other colleges and universities may be found by accessing Transferology. Students and/or parents may sign up for a free account at <https://www.transferology.com> to view course equivalencies, request information about program requirements and request an evaluation of transfer work toward a specific program. Please note that not all colleges/universities are listed in Transferology. To verify credit transferability, official transcripts should be sent to Clark State College. Student transcripts should be sent to the Clark State College Admissions Office.

### Clark State/Wright State University WrightPath Program

To increase access and affordability for a college education, Wright State University and Clark State College have entered into an agreement to provide a "gateway" to bachelor degree programs. Students will receive shared advising from the two schools to ease the transition to Wright State. All WrightPath students have the option to apply for housing at Wright State. Students are encouraged to enroll at Clark State with the intention to transfer to Wright State.

## POLICY OF STATEWIDE ARTICULATION AGREEMENT INSTITUTIONAL TRANSFER

### Institutional Transfer

The Ohio Department of Higher Education in 1990, following a directive of the 118th Ohio General Assembly, developed the Ohio Articulation and Transfer Policy to facilitate students' ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. A subsequent policy review and recommendations produced by the Articulation and Transfer Advisory Council in 2004, together with mandates from the

125th Ohio General Assembly in the form of Amended Substitute House Bill 95, have prompted improvements of the original policy. Additional legislation from the 125th Ohio General Assembly also initiated the development of a statewide system for articulation agreements among state institutions of higher education for transfer students pursuing teacher education programs.

Action by the 126th Ohio General Assembly led to the establishment of criteria, policies and procedures for the transfer of technical courses completed through a career-technical education institution; and standards for the awarding of college credit based on Advanced Placement (AP) test scores.

Legislation from the 130th Ohio General Assembly required public institutions of higher education to: use baseline standards and procedures in the granting of college credit for military training, experience and coursework; establish an appeals process for resolving disputes over the awarding of credit for military experience; provide specific assistance and support to veterans and service members; adopt a common definition of a service member and veteran; and establish a credit articulation system in which adult graduates of public career-technical institutions who complete a 900 clock-hour program of study and obtain an industry-recognized credential approved by the Chancellor shall receive 30 college technical credit hours toward a technical degree upon enrollment.

While all public colleges and universities are required to follow the Ohio Articulation and Transfer Policy, independent colleges and universities in Ohio may or may not participate in the Transfer Policy. Therefore, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements. In support of improved articulation and transfer processes, the Ohio Department of Higher Education has established an articulation and transfer clearinghouse to receive, annotate and convey transcripts among public colleges and universities. This system is designed to provide standardized information and help colleges and universities reduce undesirable variability in the transfer credit evaluation process.

## Acceptance of Transfer and Articulated Credit

To recognize courses appropriately and provide equity in the treatment of incoming transfer students and students native to the receiving institution, transfer credit will be accepted for all successfully completed college-level courses completed in or after Fall 2005 from Ohio public institutions of higher education. Students who successfully completed Associate of Arts (AA) or Associate of Science (AS) degrees prior to Fall 2005 with a 2.0 or better overall grade-point average would also receive credit for all college-level courses they have passed. While this reflects the baseline policy requirement, individual institutions may set equitable institutional policies that are more accepting.

Pass/Fail courses, credit-by-examination credits, experiential learning courses and other non-traditional credit courses that meet these conditions will also be accepted and posted to the student record.

## Application of Transfer and Articulated Credit

Application of credit is the decision process performed by the receiving institution to determine how the credits it has accepted and recorded on the student's official academic transcript will or will not apply toward program and degree requirements. While the receiving institution makes this decision, it will do so within the parameters of this policy.

The following guidelines and requirements shall govern the application of transfer and articulated credit.

### Ohio Transfer 36 (formerly the Ohio Transfer Module (OTM))

The Ohio Department of Higher Education's Articulation and Transfer Policy established the Ohio Transfer 36, which may be a subset or the entire set of a public higher education institution's general education curriculum in associate of arts (AA), associate of science (AS) and baccalaureate degree programs. Students in applied associate degree programs may complete some individual Ohio Transfer 36 courses within their degree program or continue beyond the degree program to complete the entire Ohio Transfer 36. The Ohio Transfer 36 contains 36-40 of course semester credit in English composition (minimum of 3 semester hours); mathematics, statistics and logic (minimum of 3 semester hours); arts and humanities (minimum of 6 semester hours); social and behavioral sciences (minimum of 6 semester hours); and natural sciences (minimum of 6 semester hours). Oral communication and interdisciplinary areas may be included as additional options. Additional elective hours from among these areas make up the total hours for a completed Ohio Transfer 36. Courses for the Ohio Transfer 36 should be 100- and 200-level general education courses commonly completed in the first two years of a student's course of study. Each public university and technical and community college is required to establish and maintain an approved Ohio Transfer 36.

Ohio Transfer 36 course(s) or the full module completed at one college or university will automatically meet the requirements of individual Ohio Transfer 36 course(s) or the full Ohio Transfer 36 at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a student who completes the Ohio Transfer 36 at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Ohio Transfer 36 portion of Institution R's general education program. Institution R, however, may have general education courses that go beyond its Ohio Transfer 36. State policy initially required that all courses in the Ohio Transfer 36 be completed to receive its benefit in transfer. However, subsequent policy revisions have extended this benefit to the completion of individual Ohio Transfer 36 courses on a course-by-course basis.

## Transfer Assurance Guides

Transfer Assurance Guides (TAGs) courses are pre-major/beginning major courses that have been identified as common requirements across public bachelor's degree programs. They are guaranteed to transfer and apply to specific TAG-related degree/program requirements as equivalent courses.

TAGs identify common major course work that is guaranteed to transfer. Students may elect to complete the full TAG or any subset of courses from the TAG. Because of specific major requirements, early identification of a student's intended major is encouraged.

Note: more information may be found at <https://transfercredit.Ohio.gov/educational-partners/educational-partner-initiatives/transfer-assurance-guides-tags>

## Career-Technical Assurance Guides

Collaboration among the Ohio Department of Higher Education, the Ohio Department of Education and other key stakeholders led to the development of policies and procedures to create statewide career-technical discipline specific articulation agreements and further ensure that students completing coursework at an adult or secondary career-technical institution can articulate and transfer agreed-upon technical courses/programs to any Ohio public institution of higher education and among Ohio public institutions of higher education "without unnecessary duplication or institutional barriers."

Career-Technical Assurance Guides (CTAGs) are statewide articulation agreements that guarantee the recognition of learning which occurs at public adult and secondary career-technical institutions and have the opportunity for the award of college credit toward technical courses/programs at any public higher education institution. CTAGs serve as advising tools, identifying the statewide content guarantee and describing other conditions or obligations (e.g., program accreditation or industry credential) associated with the guarantee.

Note: more detail may be found at <https://transfercredit.Ohio.gov/educational-partners/educational-partner-initiatives/career-technical-credit-transfer-ct2>

## Military Transfer Assurance Guides

In response to the legislative requirement (Ohio Revised Code 3333.164) to create a military articulation and transfer assurance guide for college-level learning that took place through military training, experience and coursework, college credit will be granted to students with military training, experience and/or coursework that is recognized by the American Council on Education (ACE) or a regionally accredited military institution, such as Community College of the Air Force.

In order to streamline the awarding, transferability and applicability of college credit, service members and veterans are guaranteed to earn certain types of credit(s) or course(s) as specified in the Military Transfer Assurance

Guides (MTAGs), which are based on the endorsed baseline standards and procedures by the Chancellor. Equivalent course(s), credits for courses or block of credit is to be awarded and applied towards general education and/or major course requirements at the receiving institution in accordance with the MTAG guarantee. There is some training, experience and coursework that the receiving institution may only be able to award college credit toward general or free electives.

In addition, public institutions of higher education shall ensure that appropriate equivalent credit is awarded for military training, experience and coursework that meet the baseline standards and procedures according to the Ohio Revised Code 3333.164. This requirement goes beyond credit/course awarded based on the MTAG alignment process.

Note: More detail may be found at <https://transfercredit.Ohio.gov/initiatives-upd/mtags/college-credit-military-experience-partners>

## Ohio Guaranteed Transfer Pathways

The Ohio Guaranteed Transfer Pathways (OGTPs) are designed to provide a clear path for students pursuing an associate degree at Ohio community colleges who plan to transfer to an Ohio public university to complete a bachelor's degree in an equivalent field. The OGTPs constitute an agreement between public community colleges and universities confirming that community college courses meet major preparation requirements and will be counted and applied toward the bachelor's degree. Students still must meet all university program admission requirements.

A student who completes all of the coursework within a major-specific Ohio Guaranteed Transfer Pathway (OGTP) will be eligible to earn an associate degree from an Ohio public community college. Successful completion of the OGTP will be recorded on the student's transcript and upon transfer to an Ohio public university, the student should receive junior standing and all coursework taken as part of the pathway will transfer to the university toward the completion of a bachelor's degree in an equivalent field. OGTP builds upon the existing statewide credit transfer guarantees including the Ohio Transfer 36, Transfer Assurance Guides, Military Transfer Assurance Guides and Career-Technical Assurance Guides. OGTPs can be found on the Ohio Department of Higher Education's website at <https://transfercredit.Ohio.gov/students/student-programs/ogtp>.

## Apprenticeship Pathway Programs

The Apprenticeship Pathways initiative advocates for individuals completing apprenticeships by incorporating their learning into academic credit, thereby saving them time and money and encouraging them to advance their academic credentials to contribute to a strong, educated workforce.

Ohio apprenticeship programs partner with public two-year institutions to provide technology-specific statewide articulation agreements that recognize non-traditional prior learning. College credit is



awarded toward a technical associate degree. Each agreement simplifies student advising by outlining how apprenticeship training in a certain pathway applies to an applied associate degree and lists remaining courses required to complete the degree. The application of the credit toward a technical associate degree in these agreements is guaranteed at the participating receiving institutions.

## Advanced Placement (AP) Exams

The State of Ohio, working with public institutions of higher education, has initiated policies to facilitate the ease of transition from high school to college, as well as between and among Ohio's public colleges and universities.

Beginning in the Fall term 2009:

1. Students obtaining an Advanced Placement (AP) exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam area(s) successfully completed.
2. General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the AP area is equivalent fulfill(s) a requirement.
3. If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied towards graduation where such elective credit options exist within the academic major.
4. Additional courses or credits may be available when a score of 4 or 5 is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.

In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics – STEM) students are strongly advised to confer with the college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.

Note: More detail may be found at <https://transfercredit.ohio.gov/students/student-programs/advanced-placement>

## College-Level Examination Program (CLEP)

The State of Ohio, working with public institutions of higher education and statewide faculty panels, has developed policies to recognize students' prior learning and to facilitate the articulation and guaranteed transfer of such learning between Ohio's public colleges and universities.

College credit is guaranteed for students who achieve an established College-Level Examination Program (CLEP) test score for exams that have been endorsed statewide as college level. Statewide faculty panels aligned CLEP exams to equivalent Ohio Transfer 36 and Transfer Assurance Guide (TAG) courses, as appropriate. If an equivalent course is not available for the CLEP exam area, by default, endorsed elective or area credit will still be awarded and applied towards graduation.

Specific endorsed alignments and scores for individual CLEP exams that are outlined in the CLEP Endorsed Alignments and Scores document are available on the Ohio Department of Higher Education website at <https://transfercredit.ohio.gov/initiatives-upd/clep>.

Note: More detail may be found at <https://transfercredit.ohio.gov/initiatives-upd/clep/college-level-examination-program-clep-students>

## One-Year Option Credit Award

The One-Year Option builds upon Ohio's articulation and transfer system to help more adults accelerate their preparation for work by earning a technical associate degree. Consistent with the philosophy of the Career Technical Assurance Guides (CTAGs), the One-Year Option guarantees that college credit will be awarded for college level learning that occurs through adult programs at public career-technical institutions.

Adults who complete a career-technical education program of study consisting of a minimum of 900 clock hours and achieve an industry-recognized credential approved by the Chancellor shall receive thirty (30) semester hours of technical course credit toward a standardized associate of technical study degree (ATS) upon matriculation at a public institution of higher education that confers such a degree. The 30 semester hours will be awarded as a block of credit rather than credit for specific courses. Proportional credit is to be awarded toward the ATS degree for adults who complete a program of study between 600 and 899 clock hours and achieved an industry-recognized credential approved by the Chancellor.

The credit earned through the one-year option will be applied to ATS degrees bearing the following standardized degree titles:

1. Associate of Technical Study in Building and Industrial Technology
2. Associate of Technical Study in Business Technology
3. Associate of Technical Study in Health and Allied Health Technology
4. Associate of Technical Study in Information Technology
5. Associate of Technical Study in Services Technology

## Conditions for Transfer Admission

1. Graduates who are considered transfer students under the Integrated Postsecondary Education Data System (IPEDS) definition with associate degrees from Ohio's public institutions of higher education and a completed, approved Ohio Transfer 36 shall be admitted to a public institution of higher education in Ohio, provided their cumulative grade-point average is at least 2.0 for all previous college-level courses and other institutional admission criteria, such as space availability, adherence to deadlines, payment of fees and grade-point

average that are fairly and equally applied to all undergraduate students, have also been satisfied. Further, these students shall have admission priority over graduates with an out-of-state associate degree and other transfer students with transferable and/or articulated college credit.

2. Associate degree holders who are considered transfer students under the IPEDS definition and have not completed the Ohio Transfer 36 from an Ohio public institution of higher education will be eligible for preferential consideration for admission as transfer students as long as the institution's admission criteria, such as the minimum academic standards, space availability, adherence to deadlines and payment of fees, are fairly and equally applied to all undergraduate students.
3. In order to encourage completion of the baccalaureate degree, students who are not enrolled in or who have not earned a degree but have earned 60 semester/90 quarter hours or more of credit toward a baccalaureate degree with a cumulative grade-point average of at least a 2.0 for all previous college-level courses will be eligible for preferential consideration for admission as transfer students as long as the institution's admission criteria, such as the minimum academic standards, space availability, adherence to deadlines and payment of fees, are fairly and equally applied to all undergraduate students.
4. Students who have not earned an associate degree or who have not earned 60 semester/90 quarter hours of credit with a grade-point average of at least a 2.0 for all previous college-level courses will be eligible for admission as transfer students on a competitive basis.
5. Incoming transfer students admitted to a college or university shall compete for admission to selective programs, majors and units on an equal basis with students native to the receiving institution.

The admission of transfer students by an institution, however, does not guarantee admission to any majors, minors or fields of concentration at the institution. Some programs have additional academic and nonacademic requirements beyond those for general admission to the institution (e.g., background check, a grade-point average higher than a 2.0 or a grade-point average higher than the average required for admission to the institution). Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as native students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be completed at the receiving institution.

## Responsibilities of Students

To maximize transfer credit application, prospective transfer students must take responsibility for planning their course of study to meet both the academic and non-academic requirements of the institution to which they desire to articulate or transfer credit as early as possible. The student is responsible to investigate and use the information, advising and other available resources to develop such a plan. Students should actively seek program, degree and transfer information; meet with an advisor from both the current and receiving institutions to assist them in preparing a course of study that meets the academic requirements for the program/degree to which they plan to transfer; use the various electronic course/program transfer and applicability database systems, including Ohio Transfer to Degree Guarantee web resources; and select courses/programs at their current institution that satisfy requirements at the receiving institution to maximize the application of transfer credit. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are foreign language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will better articulate with the receiving institution's major.

## Appeals Process

Following the evaluation of a student transcript from another institution, the receiving college institution will provide the student with a Statement of Transfer and Articulated Credit Applicability (Degree Audit Report). A student disagreeing with the application of transfer and/or articulated credit by the receiving institution must file an appeal in writing within ninety (90) days of receipt of the Statement of Transfer and Articulated Credit Applicability. The institution shall respond to the appeal within thirty (30) days of the receipt of the appeal at each appeal level. You may obtain a copy of the transfer credit appeal form [online](#) or by visiting Clark State's records and registration office.

## Student Complaints Following Transfer Appeals at the Receiving Institution

After a student exhausts the appeals process at the receiving institution and chooses to pursue further action, the Ohio Department of Higher Education (ODHE) responds to formal written complaints related to Ohio Articulation and Transfer Policy against public, independent non-profit and proprietary institutions of higher education in Ohio. While the ODHE has limited authority over colleges and universities and cannot offer legal advice or initiate civil court cases, staff will review written complaints submitted through its established process and work with student complainants and institutions.





# Student Services

***Experience everything Clark State has to offer!***

*From financial aid and scholarship opportunities to career planning and tutoring services, successful students take advantage of Student Services.*

# GETTING STARTED - THE ADMISSIONS PROCESS

Clark State College is committed to providing each student with the maximum opportunity to develop and learn. As such, we adhere to an open admissions policy.

Admission to the college does not ensure admission to a particular program of study. Many programs have established additional requirements that must be fulfilled prior to acceptance. All prospective applicants are encouraged to contact the Admissions Office for specific information.

Some students may need additional coursework in science, mathematics and English prior to enrollment in certain courses and programs. Such coursework is determined through a review of a student's past academic record or through a Placement Assessment. While all associate degree programs can be completed in two years of full-time study, it may take longer for some students. This is particularly true if the student is attending on a part-time basis or if the student needs to take college preparatory courses.

Once students have decided Clark State is the right college for them, there are a few things they need to do to get started.

## Apply for Admission

Complete the Clark State admission application online at [www.clarkstate.edu](http://www.clarkstate.edu). Students interested in applying to the college are encouraged to submit applications early. Completed applications are required for both full-time and part-time students. If students have questions, they may contact the nearest location or e-mail [admissions@clarkstate.edu](mailto:admissions@clarkstate.edu).

Students will be accepted into the college after their completed application has been received and processed by the Admissions Office. Students applying to health programs must also complete additional admissions requirements as noted in the section "Admissions for Healthcare Programs".

Applicants are notified of their acceptance within two business days of the Admissions Office receiving their application. All admission procedures apply to both full-time and part-time students.

## Apply for Financial Aid

If students need help paying for their education, they can complete a FAFSA (Free Application for Federal Student Aid). If students have questions, they may visit the nearest location or email [financialaid@clarkstate.edu](mailto:financialaid@clarkstate.edu).

## Send Transcripts

Students need to send their high school and/or other college transcripts or their General Education Diploma (GED) if:

- Students have previous college credits to transfer into Clark State or they are registering for a class that requires prerequisites. The college will need an official copy of their college transcripts.
- Students entering Judicial Court Reporting, Licensed Practical Nursing, Registered Nursing, Diagnostic Medical Sonography, Physical Therapist Assistant or Emergency Medical Services, must submit their high school transcripts.
- Students are pursuing a bachelor degree.

High school and/or other college transcripts should be sent to the nearest location.

If students deliver their college transcripts in person to any location, the transcripts must remain sealed in their original envelopes to retain their "official" status.

## Take the ACCUPLACER Placement Assessment

If students are entering a degree or certificate program at the college, they may be required to take placement assessments in reading, writing and mathematics before they register for their first courses. If students are a recent high school graduate, they may be able to use their high school transcripts to bypass all or part of the placement assessment. To determine if they are eligible, students may call 937-328-6049 or email [successcenter@clarkstate.edu](mailto:successcenter@clarkstate.edu). This test will determine the level of classes in which students will have the most success during their first term at Clark State.

A scheduled appointment is required for assessment. Allow three hours to take the assessments. The assessments may not be necessary if students have transfer college courses in English and math or adequate ACT or SAT scores (see below). If they are enrolling exclusively in non-credit courses they do not need to take the assessment.

Paper, pencil and calculator will be provided. Personal calculators may not be used. A study guide is available at all locations or online <https://studentportal.accuplacer.org>

Most often, students' placement assessment results will remain valid for three years in reading and writing and two years in math. Initial placement tests are free of charge. The first retake is allowed seven (7) days after the initial assessment date. A second retake is allowed thirty (30) days after the first retake. All subsequent retakes are permitted 120 days from the most recent assessment. The retake fee is \$15.

Students' transcripts or scores must be on file at the time of registration. Students will be required to bring a valid photo ID and their student ID number.



If students have a documented disability (either a physical or learning disability) and need accommodations for taking the placement assessments, they may make arrangements in advance with the Office of Accessibility Services, 937-328-6019 or 937-431-7155.

To schedule an appointment to take the placement assessment, students may contact the nearest location or schedule their appointment online at <https://www.clarkstate.edu/admissions/placement-assessment/>.

- Leffel Lane Campus, Springfield: Student Academic Support Center, Rhodes Hall first floor, 937-328-6049 or [successcenter@clarkstate.edu](mailto:successcenter@clarkstate.edu)
- Beavercreek location: Success Center, Room 121, 937-429-8921 or [greenetesting@clarkstate.edu](mailto:greenetesting@clarkstate.edu)
- Bellefontaine location: Ohio Hi-Point Career Center, 937-599-7602 or [bellefontaine@clarkstate.edu](mailto:bellefontaine@clarkstate.edu)
- Xenia location: 937-431-7171 or [xenia@clarkstate.edu](mailto:xenia@clarkstate.edu)

As an open admissions institution, Clark State does not require college entrance exams. However, if students are currently in high school, they are encouraged to take either the ACT or SAT, especially if they will be transferring to a four-year college to complete a bachelor's degree. The following scores on these tests will exempt students from having to take initial placement tests:

Students are excused from mathematics/algebra placement testing if they have received the following mathematics scores in the last three years: 22 ACT or 520 SAT.

Students are excused from placement testing in reading if they have received the following Reading scores in the last three years: 21 ACT or 450 SAT.

Students are excused from placement testing in writing if they have received the following English scores in the last three years: 18 ACT or 430 SAT.

Students with mathematics scores of 23 ACT or 700 SAT are eligible for mathematics proficiency tests.

Students with English scores of 23 ACT or 670 SAT are eligible for English proficiency tests.

If students recently graduated from high school or recently earned their GED they may be able to bypass parts of the placement test. To see if they qualify, students can call 937-328-6049 or email [successcenter@clarkstate.edu](mailto:successcenter@clarkstate.edu).

## Attend Orientation

Clark State provides in-person and online orientations that aim to help students navigate their education and assist them during several milestones common in an educational journey. Common orientations will include the enrollment orientation to help prospective and returning students complete their application and enroll in their first or next semester, new student orientation that helps students understand the many transitions that take place when entering college and how to achieve and sustain academic and personal wellbeing and the completion orientation to help students transition to the next phase of their journey whether it be transitioning to another

school or getting a job before they graduate. It is Clark State's goal to customize these guided experiences to the student's needs and interest, introducing them to specific individuals that will serve as primary points of contact during their time at Clark State, including staff and faculty advisors, as well as resources related to the student's history, identity, interests, experience and eligibility.

Note: some orientations are specific to certain programs, like the fire or police academy or College Credit Plus program and are managed by those specific departments and not the college.

## Obtain A Student ID

Students may obtain their ID at the Library in the Sara T. Landess Technology and Learning Center, Room 122 or at the Beavercreek location information desk.

# STUDENT TYPES

## Adult Student

School is probably just one of many responsibilities that students will have to keep track of during their normal day. Clark State will work with students' busy schedule by offering flexible day and evening class schedules at our four campus locations or online, so that they can maintain their career, family and home. Clark State offers a variety of degrees and certificates both credit and non-credit that will assist students with their transition into college or help them start on the path to a new career. We encourage students to take full advantage of our services for adult students that include academic advising, career exploration, financial aid and scholarships and veteran services. Additional information on entrance requirements and services can be obtained at any of our locations or at [admissions@clarkstate.edu](mailto:admissions@clarkstate.edu).

## High School Student

High school students have a variety of options to earn college credits before they graduate. To learn more about becoming a Clark State student while still in high school, students should contact their high school counselor. If students have additional questions, they may contact the nearest location or email [admissions@clarkstate.edu](mailto:admissions@clarkstate.edu).

## College Credit Plus Program (CCP)

The College Credit Plus Program provides 7<sup>th</sup> through 12<sup>th</sup> grade students who are academically prepared for college with a chance to start college early. The program is intended to provide students with a more rigorous academic schedule while earning both high school credit and college credit simultaneously in a variety of subjects. After graduating from high school, CCP students can use their CCP credits to continue their education at Clark State to complete a certificate, an associate degree or a bachelor's degree or they can transfer their credits to another college or university.

This program is free for all public high school students who are eligible to participate. College Credit Plus is offered in a variety of modalities for students: in the high school (where approved), online and on campus.

Clark State has created partnerships with local high schools by offering college level courses at their location taught by appropriately credentialed high school instructors to high school students who meet the required course requirements. All CCP course final grades will be based on the final letter grade the student receives in the college course offered at the high school. Grades will be calculated according to the high school instructor's standards and will also be the grade recorded on the student's official college transcript. High school instructors and counselors can help students determine if the classes they are taking are offered for college credit and can facilitate their enrollment. The CCP Advisor can provide additional information and entrance requirements.

CCP students can also take courses online or at Clark State's Springfield, Beavercreek, Bellefontaine or Xenia

locations. CCP students on a Clark State campus will experience a positive college environment with personal attention in the classroom with our small class sizes. If students are ready for the college experience, Clark State is a great place to begin!

All CCP students complete the online College Credit Plus Program application by going to [www.clarkstate.edu](http://www.clarkstate.edu) and selecting "Enroll Now." CCP students then submit either a high school transcript, ACT, SAT or Placement Assessment results to determine eligibility for acceptance into the program and course enrollment as well as attend a CCP orientation session.

## College Credit Plus Option A

High school students who are participating in the College Credit Plus Program as a self-pay student can still enroll in college classes on Clark State's campus while in high school. Students interested in this option must apply and meet all necessary prerequisites and co-requisites for all Clark State courses. All costs associated with attending college classes under this option are the responsibility of the student and their parents or guardian and must be selected at the time of registration.

## College Tech Prep

Tech Prep is the national initiative which creates curriculum pathways between high schools and career centers and colleges. Clark State is part of the West Ohio Tech Prep Regional Center. Students in career technology programs and area high schools may receive college credit for their high school technology training. Clark State has articulations with high schools as well as career centers and their satellite locations in Clark, Champaign, Logan, Hardin, Union, Montgomery and Greene counties.

Clark State offers pathways in:

- Agriculture and Environmental Systems (Agricultural Business, Agricultural Engineering, Horticulture)
- Arts and Communication (Graphic Design, New Media)
- Business and Administrative Services (Accounting, Logistics and Supply Chain Management, Management, Marketing, Office Administration)
- Diesel Technology
- Education (Early Childhood, Teacher Education Transfer)
- Engineering Technologies (Computer-Aided Design Technology, Mechanical Engineering Technology)
- Health Sciences (Medical Assisting, Medical Laboratory Technology, LPN, Nursing, Physical Therapy)
- Heating, Ventilation, Air Conditioning and Refrigeration
- Information Technology (Computer Networking, Computer Software Development, Cybersecurity)
- Law and Public Safety (Criminal Justice, Emergency Medical Services)
- Manufacturing (Industrial Technology, Welding)

Clark State also offers an Associate of Technical Studies degree for students whose technical skills are not offered in a specific technical degree program. This is offered to career center and high students in career tech programs such as carpentry, cosmetology and others.

A great opportunity for all high school career tech students is the George Mueller Tech Prep Scholarship for up to \$3,000. This is open to all qualified Tech Prep students in career centers and high schools graduating with a 2.25 GPA or better.

## New Student

Students who have never attended a college will need to take the placement test, provide ACT/ SAT scores or Ohio high school transcript and attend orientation. Students who need additional academic support may be referred to a local ASPIRE or adult literacy program.

## Transfer Student

If students have previously attended a college or university, they need to submit official transcripts for courses they want evaluated for transfer credit. Official transcripts need to be sent from the previous college or university directly to Clark State College or hand-carried, sealed and unopened, to a Clark State location.

## Reverse Transfer

Students may earn a degree through Reverse Transfer. Former Clark State students who left Clark State before earning a degree and have attended and earned credits from another two-year or four-year institution, may be eligible for an Associate Degree at Clark State by transferring remaining course requirements back to Clark State from another institution.

To be eligible, a student must have earned a minimum of 15 semester hours of your academic program from Clark State and have a cumulative grade point average of 2.0 or higher at Clark State.

Visit our website at <https://www.clarkstate.edu/academics/reverse-transfer/> or contact Records and Registration for additional information.

## Active-Duty Military Personnel

If students are military personnel with active orders, they are eligible for a reduced tuition rate of 50%, not including fees. Spouses of active-duty military personnel are also eligible for a 50% reduced tuition rate. Students may take the required general education courses at Clark State and transfer them back to the Community College of the Air Force (CCAF) and apply them to their associate degree. Students may also transfer their credits from CCAF to one of the many Clark State degree programs.

Students may choose to begin their bachelor's degree by completing an associate of arts or associate of science transfer degree at Clark State. They may opt to complete one of our transfer degrees and begin as a junior at Wright State University. Or, they may complete the Ohio Transfer 36 set of courses and transfer those courses to the college/university of their choice.

The admissions staff will not make multiple unsolicited contacts (3 or more), including contacts by phone, email or in-person or engage in same-day recruitment and registration for the purpose of securing Service member enrollments.

For more information, contact us at 937-431-7157.

## Veteran

Students that are veterans or a dependent of a veteran, may qualify for educational benefits. Financial assistance for college may be available for students that have served in the military, Selected Reserve or National Guard. An academic advisor specializing in educational benefits for veterans will assist students who qualify for this type of assistance to cover the expense of college tuition.

Advisors will help students complete the appropriate Veterans Affairs (VA) forms to receive educational benefits and provide important information on what must be done to maintain the benefit while taking classes at Clark State.

For more information or to receive personal assistance, students may contact Veteran Services at 937-328-6462.

## Prior Learning

Earn credit for prior learning! Students with years of work experience, may be closer to a college degree than they may think. Clark State can help students apply their experience, knowledge and skills toward a degree, potentially saving them time and money.

Prior Learning Assessment (PLA) is a process that enables learners to demonstrate what they have learned and translate that learning into college credit. PLA validates knowledge acquired through life experience, work experience, military experience, civic engagement, individual study, reading and participation in classes or training sponsored by business and industry, professional organizations and/or government agencies. Credit is awarded for college-level knowledge gained from experience and not for the experience itself. College-level learning is validated through PLA when learners prove their mastery of the knowledge, skills, competencies and abilities in a specific area of study offered by the college.

For more information, students may contact Academic Affairs at 937-328-3867.

## Mature Citizen

Ohio Residents who are sixty years of age or older may audit college courses on a space-available basis. The student will not receive college credit for an audited course. Instructional and general fees are waived for eligible students who choose to participate in this program. Students are responsible to pay any additional fees that may be associated with the course, i.e., lab fees, technology fee, auxiliary fee, etc. Mature Citizen registration requires instructor permission. The instructor and the student will pre-determine the

amount of engagement the student will have in the course. Some courses do not qualify for the mature citizen's program, which means an instructor may deny permission to register. There is a potential for the auditing student to lose their seat in the course if the course reaches enrollment limits and a degree-seeking student wishes to enroll. In addition to course enrollment, participating students have the opportunity to use college facilities and educational services and may take part in student activities.

## International Student

Clark State is authorized under federal law to accept non-immigrant (F-1 visa) students. Students wishing to enroll under this immigration status must apply through the Admissions Office. The following documents are required:

**New Student** (Students currently living in their home country)

International Student Application: Be sure the name on the application is spelled the same as the name in the passport.

Copy of passport: Pages with identification information and expiration date.

Proof of Graduation from High School: Original or certified copies of official diploma or certificate from each high school translated into English.

Evidence of English Language Proficiency: Applicants must demonstrate proficiency in the English language. To demonstrate this proficiency, applicants must submit satisfactory results on one of the following tests, which was taken within the last two years or meet one of the following criteria:

- Test of English as a Foreign Language (TOEFL): 60 on the Internet-based test or 500 on the paper-based test.
- International English Language Testing System (IELTS): 5.0
- Duolingo: 80
- English is the applicant's native language
- Official transcripts from a previous U.S. college or university showing a grade C or better in college/university-level English courses. This does not include English as a Second Language.

Please note: Regardless of Duolingo, IELTS or TOEFL scores, all new students are required to take the ACCUPLACER placement assessment upon arrival at Clark State College.

Evidence of Financial Support: The student and their sponsor(s) must complete the Statement of Financial Support, which states that there are sufficient funds available to cover educational and living expenses. An estimation of annual expenses can be found at [www.clarkstate.edu](http://www.clarkstate.edu).

**IMPORTANT:** the student's sponsor must also provide current financial documentation such as bank statements, employment/salary letters, tax returns, etc. The documentation must be less than six months old, include the sponsor's name and signed by the appropriate bank or government official.

**Transfer Student** (Students transferring from another U.S. institution)

Complete and submit the following:

- All documents required for a New Student under the International Student Admission.
- Copies of current and all previous I-20s.
- Copy of passport: Pages with identification information and expiration date.
- Copy of Visa.
- If eligible, the transfer form will be made available after all admission documents have been received. The student and their DSO at their current institution must complete this form.

**Concurrent Student** (Students concurrently enrolled at their U.S. home institution and Clark State College):

Complete and submit the following:

- International Student Application.
- Copy of current I-20.
- Copy of visa.
- Copy of passport.
- Transcript(s) from current U.S. college or university.

Please note: If the transcript does not show the necessary course prerequisite(s), students may be denied approval to register for a specific course.

Clark State will issue an I-20 for an F-1 student visa only after the necessary documents have been received and evaluated.

Incomplete application packages will not be processed. Failure to submit the documents as required will result in a delay of processing.

## Fresh Start

Students that re-enroll after an absence of three or more consecutive academic years, may petition the Records and Registration Office to eliminate the progress and transcript GPAs of their previous enrollment. Any courses in which students received a C or better will be counted in the "hours earned" but not in the GPA. To qualify students must have a cumulative progress GPA of 2.5 or less prior to readmission. In addition, the student must have at least thirty semester hours remaining before completing a bachelor's degree, fifteen semester hours remaining before completing an associate degree and/or at least twelve semester hours



remaining before completing a one-year certificate. A Fresh Start can only be used once and cannot be applied to the coursework of a degree or certificate that has already been conferred. A Fresh Start will not change the academic progress calculation for financial aid purposes of warning or suspension. For more information about Fresh Start and eligibility, students may contact the Records and Registration Office at 937-328-6015.

## Re-Admission

When students return to Clark State after two years or more, they will need to update their student information in the Admissions Office. Students will need to meet the curricular requirements in place at the time of their return, if they interrupt their attendance for four or more consecutive semesters. Technical and basic courses taken prior to any interruption may have to be re-evaluated. Those that were taken in the last five years will generally still meet graduation requirements. However, some programs may have more stringent requirements. Students should contact their academic school to determine the acceptability of previous courses.

Courses that were taken more than five years ago will be evaluated on an individual course basis. Courses taken more than seven years ago will be evaluated for acceptability by the academic school dean.

If students want to re-enter a health program, they should contact the Health, Human and Public Services School for additional reinstatement requirements.

Students enrolling after an absence of three or more consecutive years may wish to investigate the Fresh Start option.

## English Proficiency

If students wish to test out of English 1111, they will need to complete a three-hour exam. This exam will include a written essay and a multiple-choice test which has been prepared by the English faculty at Clark State. This test is not available to students who are currently enrolled in English 1111 or have previously taken ENG 1111 at Clark State with a grade of A, B, C, D, F, W or Z. Proficiency testing is not available for English 1112.

Students should take the test before the end of midterm week of the term before they plan to be registered for the class. For Fall semester, the test should be taken in the spring. To take this exam, follow the process for obtaining prior learning credit.

## Space-Limited Programs

Some programs offered at Clark State are restricted in the number of students who can be admitted each year. These space-limited programs are Medical Assisting, Medical Laboratory Technology, Physical Therapist Assistant, Practical Nursing, Registered Nursing, Nursing Transition (Practical Nursing to Registered Nursing, Paramedic to Registered Nursing), Diagnostic Medical Technology and the health programs offered through the Northwest Ohio Allied Health Education Consortium (Respiratory Care, Radiographic Imaging and Occupational Therapy Assistant programs).

## Health Technologies Admissions

Applicants for Health Technologies programs need to submit a program-specific petition/application request. Students must fulfill the prerequisites as listed prior to petitioning/ applying to a health program. High school applicants for these programs are encouraged to apply for admission to the college in their junior or senior year.

Entry into some of the health programs is competitive and based on academic achievements.

All applicants must meet the required cumulative grade point average and academic requirements for the respective program prior to applying. College preparatory courses and other courses, which are not listed as part of the curriculum, are not typically included in calculating the cumulative GPA.

Transcripts are reviewed prior to sending acceptance letters for these programs and prior to the beginning of the technical courses. Applicants must have the required grade point average in order to be eligible for acceptance into the program.

Non-space limited healthcare certificates and AA, AAS, AS and ATS degrees are available. Students interested in completing one of the certificates or degrees while waiting to enter a space-limited program should contact an academic advisor for guidance. Students should also contact the Financial Aid Office to determine the impact pursuing an additional certificate or degree might have on their financial aid eligibility.

## Physical Therapist Assistant

Students need to obtain the PTA Program Application Handbook from the program page on the college website or through an academic advisor. Students must refer to PTA program information pages in the Catalog and the PTA Application Handbook for information and take the following steps:

- Demonstrate a minimum 2.5 cumulative grade point average (GPA) for all required courses taken in the curriculum, regardless of where the course was completed.
- Have a minimum 2.0 cumulative Clark State institutional GPA.
- Successfully complete reading, writing and math placement tests or equivalency prior to applying.
- Successfully complete or be currently enrolled in course to complete the anatomy and physiology prerequisites prior to applying.
- Complete 30 hours of observation.

Acceptance into the PTA program is a competitive admission process. Applications are accepted in the Health, Human and Public Services School Office, Applied Science Center, Room 133 or at the Greene Center between December 1-February 1 of each school year. Students are entered into the program once a year in the fall semester. Admission notifications are made in March or April of each year.

## Medical Assisting

Students need to successfully complete reading, writing and math/algebra placement tests or obtain a grade of C or better in the appropriate college preparatory or college-level course prior to petitioning for the program.

After the petitioning requirements have been completed, students petition for the program online. Students who have met the petition requirements and submitted a petition are eligible to start the Medical Assisting program's technical (MAS) course sequence. Students contact the Medical Assisting program coordinator for academic advising and approval to enroll in the MAS courses.

## Medical Laboratory Technology

Students need to successfully complete reading, writing, math and algebra placement tests or obtain a grade of C or better in the appropriate college preparatory or college-level course prior to petitioning for the program.

After the petitioning requirements have been completed, students petition for the program online. Students are entered into the program once a year in fall semester based on the date of their approved petition request. Space limitations do not apply to distance students who complete lab sessions at out-of-area, off-campus sites.

## Practical Nursing

Students need to successfully complete the reading, writing, math and algebra placement tests or equivalency prior to petitioning to the program. Refer to program information for equivalencies. After the petitioning requirements have been completed, students petition for the program online. The number of students that can be admitted to the program each year is restricted due to the limited availability of clinical sites. All applicants are considered for admission by the date in which they complete all petitioning prerequisites and file a petition online to be placed on the waiting list.

Students need to successfully complete MST 1181 or an equivalent nurse aide training course and furnish verification of nurse aide competency at the time of enrollment in the technical courses. MST 1181 is not a requirement for the waiting list.

## Registered Nursing / Nursing Transition (Paramedic to RN; LPN to RN)

The Registered Nursing (RN) program is space limited and has a competitive admission process. Application to the program does not guarantee admission. To be considered for acceptance into the RN Program, students need to do the following:

- Complete application to the college, declaring RN as their major.
- Provide official high school transcripts or GED certificate and official transcripts from all previously attended colleges/universities to the Admissions Office, if needed, to demonstrate completion of admission requirements, prerequisites or curriculum courses.

- Demonstrate a minimum 2.5 cumulative grade point average (GPA) for all required courses in the curriculum, regardless of where the courses were completed.
- Have a minimum 2.0 cumulative Clark State institutional GPA.
- Complete TEAS (Test of Essential Academic Skills)
- Complete reading, writing, math and algebra placement tests or equivalency (refer to nursing program information for equivalencies) if needed.
- Have high school or college chemistry or biology Lab course (refer to nursing program information for more specific information).
- Have current STNA certification or MST 1181 completed, in progress or planned for completion prior to starting nursing courses (not required for LPN to RN).

Completion of the above minimum requirements and application to the program does not guarantee admission. Entry to the nursing program is competitive and based on academic achievements. Applications are reviewed and scored using a rubric. Applicants with the highest points will be offered admission to the program. If spaces are not available for all applicants with the same score, these applicants will be ranked by the dates and times their applications were received.

### ***Northwest Ohio Allied Health Education Consortium Programs***

Students submit their program application to Rhodes State College. Refer to the degrees and certificates area on Clark State's website for application requirements.

## Diagnostic Medical Sonography

The Diagnostic Medical Sonography (DMS) program is space limited and has a competitive admissions process. Application information is accessible on the program page of the college website or through an academic advisor.

## Reinstatement for Health Programs

If students withdraw from or do not continue in the technical courses in a space-limited program and wish to re-enter, they should contact the Health, Human and Public Services School for a copy of the program-specific Reinstatement Policy.

Students who wish to re-enter are required to have at least a 2.0 cumulative grade point average in courses required for the program before the reinstatement request will be considered. Transcripts are reviewed on an individual basis prior to accepting students for reinstatement. Students may be required to demonstrate competency in previously completed courses and some courses may need to be repeated. If reinstatement criteria are met, eligible students are reinstated on a space-available basis. Reinstatement is not guaranteed.

## Degrees or Certificates Leading to Professional Licensure or Certification and/or Participation in Clinical Placement, Internships or Practicums

Students who are pursuing degrees or certificates leading to application for professional licensure or certification and/or who will be participating in clinical placements, internships or practicums through their program should be aware that their host facility may require a criminal background check, finger printing and/or drug screening. In such situations, each student is responsible for obtaining and paying for the background check or other screening process. Although the college will make reasonable efforts to place admitted students in field experiences and internships, it will be up to the host facility to determine whether a student will be allowed to be placed at that facility. Host facilities may consider expunged convictions in placement decisions. Students shall further be aware that a criminal record may jeopardize licensure by the state certification body. Students should consult the licensing or certification body corresponding to their intended occupation for more details. Successful completion of a program of study at the college does not guarantee licensure, certification or employment in the relevant occupation. Standards may change during a student's program of study.

## ACADEMIC ADVISING

Academic advising is a shared responsibility between the student and academic advisor. The student and academic advisor collaborate to develop, follow and complete an academic plan. New students are expected to begin their academic program by discussing goals with an academic advisor. First-term students, should attend new student orientation, complete placement assessment and meet with their advisor to register.

Academic advisors can help students by answering questions about how to obtain the necessary information to complete a program of study. It is recommended that students develop both short and long-term plans and discuss those with their academic advisor. The academic advisor's role is to discuss options and offer advice regarding academic programs of interest.

After completing the application and placement assessment process academic advisors can provide guidance with term scheduling.

Students with transfer credit from another college should have official transcripts sent to the college.

During the advising session, academic advisors will review the specific requirements for completion of the student's academic program. The program requirements can also be found on the Clark State website.

Priority registration provides Veteran/Military students, their spouses and dependents, as well as students affiliated with the TRIO Student Support Services with first choice of classes. It is highly recommended that these students take advantage of this opportunity and work with their academic advisor to make appropriate course selections.

New students will meet with their academic advisor until the point their advisor informs them it is time to transition to their programmatic faculty advisor. Health majors may work with their academic advisor until they have been admitted into their program. All programs start with their faculty advisor at different points in their educational journey and students should always watch their email.

If students do not know the name of their academic advisor, they may contact the nearest location or email at [advisors@clarkstate.edu](mailto:advisors@clarkstate.edu).

# REGISTRATION INFORMATION

New students should participate in new student orientation before registering for classes. Students will meet with an academic advisor for scheduling.

Returning students, should contact an academic advisor for registration assistance.

Priority registration is available to Veteran/Military students, their spouses and dependents as well as students affiliated with TRIO Student Support Services.

Information about when to register for classes is found on the college calendar.

## Appeals for Transfer Credit

Students disagreeing with their application of transfer credit by Clark State shall be informed of the right to appeal the decision and of the process for filing the appeal. The Records and Registration Office shall make available to students the appeal process for Clark State. Students need to complete the Transfer Credit Appeal form available [online](#) or from the Records and Registration Office.

The appeal form is forwarded by the Records and Registration Office to the appropriate academic dean. The appropriate academic dean evaluates or re-evaluates the course(s) and returns the decision to the Records and Registration Office. The Records and Registration Office contacts the student regarding the decision.

If a student is not satisfied with the decision, they may appeal to the Vice President of Academic Affairs. The Vice President of Academic Affairs has the final decision for all academic matters.

## Auditing a Course

If a student audits a course, they will not receive a grade or credit. Instructor permission is required. The instructor and the student will pre-determine the amount of engagement the student will have in the course. Some courses do not qualify for auditing, which means an instructor may deny permission to register. The fee for auditing is the same as for credit. Audit status is not convertible to credit status nor is credit status convertible to audit status once the registration has been completed. Students using Veteran's benefits or receiving financial aid may not audit classes.

## Change of Major

Students who decide to change or add a major must complete a Change of Information form and meet with an academic advisor/faculty advisor for approval.

## Credit-Hour Limit

Students may enroll for a maximum of 20 credit hours per term during the regular academic year. They need the approval of their academic school dean to enroll in more than 20 credit hours.

## Credit/No-Credit Enrollment

Students may petition the Records and Registration Office for permission to take one course each term on a credit/no-credit (CR/NC) basis for a maximum total of six courses. Two of these courses may be selected from general education offerings, two courses that are basic to a major and two from the technical courses.

Students may make their choice at the time of registration. Once the term has begun, they cannot change back to the standard grading system. Instructors will not know of the student's decision. At the end of the term, a grade of C or better is converted to CR and a grade of D or lower is converted to NC. Grades of CR or NC are not included when computing the grade point average, however, the CR grade credits will be added to hours completed.

## Dropping or Withdrawing Courses

If for any reason a student cannot complete a course, they must officially drop or withdraw from the course. Even if the student never attended a course that they registered for, they must officially drop/withdraw or a grade may be assigned. To drop/withdraw a course, a student completes and submits a drop form in accordance with college policy. To drop/withdraw after the 15<sup>th</sup> day of the term, they need to contact an academic advisor to formalize the process. The official published dates to drop/withdraw from a course are on the college calendar.

Grades will be reflected on transcripts as follows:

- If the course is dropped on or prior to the 15<sup>th</sup> calendar day of the term, the work attempted will not be counted and no notation of the enrollment will appear on the transcript.
- If the course is withdrawn after the 15<sup>th</sup> calendar day of the term through the published date indicating completion of 70 percent of the term, the grade of W will appear on the transcript.
- If the student stops attending after the published date indicating completion of 70 percent of the term, the earned grade will be recorded.
- Students who do not attend class by the last day to establish attendance as published in the Important Dates will be administratively dropped for non-attendance. The course will not be counted and no notation of the enrollment will appear on the transcript.
- Students who stop attending class prior to completion of 70 percent of the term, but fail to officially withdraw from the course will receive a grade of UW (unofficial withdraw).

For the last date to withdraw from flexibly scheduled courses, students may contact the Records and Registration Office. Registration/Add/Drop forms are available from academic schools, advising offices, Records and Registration and the Beavercreek, Bellefontaine and Xenia locations. Students can also drop courses online. Rules regarding assignment of



grades still apply. If a student decides to withdraw from a class and has any form of financial aid, they should consult with the Financial Aid Office prior to the withdrawal to determine what effect it will have on their financial aid awards and eligibility status. If a student receives Veteran's benefits and drops a class or withdraws from all classes, it is their responsibility to notify the Veteran's Certifying Official in the Records and Registration Office, Sara T. Landess Technology and Learning Center, Room 114, 937-328-6462. Courses dropped anytime during the term could result in an over-payment dating back to the first day of the term.

## Repeating Courses

Students may repeat any course at the college one time without having to request permission. Permission to take courses a third or more times is obtained from the dean of the academic school responsible for their program of study. If enrolled in a health sciences program, they also need to abide by the program-specific, published regulations about re-enrolling in courses.

A course that is re-taken will count only once toward graduation requirements. All grades will appear on the transcript. For a course taken two or more times, the last grade earned will be included in both the Progress and Transcript GPAs.

For students using federal student aid, a course can be included in financial aid eligibility one time after the course has been completed with a grade of "D" or higher.

## SOCHE Cross-Registration Program

Students who are regularly enrolled at Clark State or any other Strategic Ohio Council for Higher Education (SOCHE) institution, may be eligible to register for classes offered by another SOCHE institution at no additional charge on a space-available basis. Information on the eligibility requirements, registration procedures, a list of the colleges and universities participating in the SOCHE cross-registration program and the Cross-Registration application are available online [www.soche.org/cross-registration/](http://www.soche.org/cross-registration/).

## Ways to Register

Students can register online through Student Planning on the myClarkState portal or at the nearest location.

# PAYING FOR COLLEGE

## How Much Does Clark State Cost?

	Ohio Resident (per credit hour)	Out-of-State Resident (per credit hour)
Instructional Fee	\$152.33	\$304.66
General Fee	\$11.00	\$11.00
Technology Fee	\$11.00	\$11.00
Career Advantage Fee	\$6.00	\$6.00
<b>Total Cost</b>	<b>\$180.33</b>	<b>\$332.66</b>

## Other Fees and Expenses

Application fee (one time only) .....	\$15
Auxiliary fee (per semester) .....	\$7.50
Health Service fee (per semester) Summer: .....	\$15
Health Service fee (per semester) Fall/Spring: .....	\$25
Online fee (per credit hour) .....	\$7
Late registration fee (per semester) .....	\$25
Transcript fee .....	\$5
Delayed Payment Plan service charge .....	\$15
Delayed Payment Plan late fee (per installment) .....	\$25
Proficiency fee (written only portion) .....	\$25/credit hour
Proficiency fee (written only portion) - for 3 or more credit hours .....	\$75
Proficiency fee (skills only exam) .....	\$50
Proficiency fee (written and skills exam) - cost of skills portion is contingent upon the possible lab fees/materials needed to complete the skills portion .....	\$75-\$125
Portfolio Assessment - For courses with two or less credits .....	\$100
Portfolio Assessment - For each course with three or more credit hours (equivalent to the total of one credit hour) .....	\$140
ACCUPLACER retest fee .....	\$15
Returned check fee .....	\$25

Instructional fees are charged for all credit hours registered in any one academic term. General fees are used to support Student Senate, student activities, and all other student services of the College including Financial Aid, Records, Counseling Services and Student Support.

Auxiliary service fees are used to support the operation and maintenance of parking lots and roadways, the Campus Police Department and other safety and security activities on all campuses.

Revenue generated by the technology fee is used to directly benefit students by providing the state-of-the-art technology that is critical to the learning experience.

All fees and expenses are established by the Clark State College Board of Trustees and are subject to change without notice. Fees and expenses are due and payable prior to the beginning of the term in which students are enrolled. Although we make every effort to maintain tuition and fees at the lowest possible level, some students may find the cost of a college education to be too great without some form of assistance. The college and the Clark State Foundation provide a variety of federal, state and institutional financial assistance programs to help. Students may refer to the Financial Aid section in this catalog for more information.

### **Cash Refund Policy**

Refunds of instructional, general, laboratory and technology fees will be made according to the Fee Refund Schedule. All drops or withdrawals must be in writing and are effective on the date received by the Records and Registration Office. Refunds are not issued for late fees, auxiliary services fees or Delayed Payment Plan service charges. For certain programs, liability insurance is required to be purchased. For these programs, a lab fee is assessed for this coverage. The coverage will remain in effect until the expiration of the student's insurance contract. For more information, please contact the Financial Aid Office or Cashiers Office.

Students are refunded at 100% through the 15<sup>th</sup> calendar day of the term.

### **Ohio Residency**

Clark State follows the Ohio Department of Higher Education Rule 3333-1-10 for determining a student's residency status for subsidy and tuition surcharge purposes. Copies of this rule and the Ohio Residency Application are available from the Records and Registration Office or on Clark State's website. Specific exceptions and circumstances may require a review of each student's residency classification on an individual basis. An Ohio Residency Application Packet must be submitted two weeks prior to the term begin date. Approval must occur prior to the first day of classes for the term for which it is to be effective and is based on residency status as of the first day of the term.

### **Parking**

Parking is free on all of our locations and permits are not required. It is expected that visitors will use respectful parking lot etiquette (ie: not parking in fire lanes, handicapped parking without proper identification, leaving vehicles overnight, etc.) failure to do so could result in a penalty. Clark State is not responsible for personal vehicles parked overnight.

### **Payment**

Payment for tuition may be made by cash, check, MasterCard, Discover or VISA. Students who fail to meet their financial obligations will be administratively withdrawn from classes. In addition, students may not be permitted to graduate, receive an official transcript, or register for subsequent terms until all their financial obligations to the college are satisfied. To help ease the burden of paying tuition costs, Clark State offers different payment plans.

To participate in this plan for fall and spring semesters, students will pay one-fourth of their assessed fees plus any service charge by the fee payment deadline. The remaining balance is divided into three installments and is payable in approximately three 30-day increments. To participate in this plan for the summer session, students will pay one-third of their assessed fees plus any service charge by the fee payment deadline. The remaining balance is divided into two installments and is payable in approximately two 30-day increments. Please reach out to the Cashier Office about B and D only, payment plan options. Books and supplies are not included in this fee payment plan. If students register after the fee payment deadline, they must pay the initial installment (including any service charge) when they register.

### **Student Printing**

Each enrolled student is provided \$7.50 in a printing account to print documents on campus each semester. Students who exceed the \$7.50 allocation for the semester can add additional funds for printing by purchasing a pre-paid top-up card from the Bookstore. Print dollars provided by the college do not carry over from one semester to the next. Print dollars purchased by the student via the bookstore do carry over. However, once the money is placed into the printing account, it cannot be refunded.

Each semester, the college will refresh all enrolled student accounts with \$7.50. Unused pages do not carry over from one semester to another. The value placed in the students' printing accounts by Clark State will be used before any carryover funds added by the student are used.

## FINANCIAL AID

Financial aid is available from many sources to help students who, without such aid, would be unable to attend college. Although students and their families are primarily responsible for the cost of education, financial aid can fill in the gap if families can afford only part of the cost.

### How to Apply

Financial aid applications are available in October for the following financial aid year that begins with fall semester. Students should file these applications as soon as the FAFSA is available.

Clark State uses the Free Application for Federal Student Aid (FAFSA). The FAFSA is available to complete at <https://studentaid.gov/>. Clark State's Federal School Code is 004852. Students should complete this form using prior year income. The information provided on this form is processed and a Student Aid Report (SAR) is sent to the student's e-mail address as listed on the FAFSA. This information is also sent to the schools listed on their FAFSA. The SAR will include an estimate of financial need. With a few exceptions, all financial aid awarded is based on demonstrated financial need. By filing the FAFSA, students will be considered for all aid for which they might be eligible including federal grants and loans. The Financial Aid Office determines eligibility and the student receives an award notification via their Financial Aid Self-Service portal detailing aid that is being offered. Applications for additional aid, such as Federal Work-Study, will be considered as long as funds are available. We encourage students to apply early. Materials completed by the deadlines below will be processed by the beginning of the term, provided the student meets all eligibility requirements and has submitted all requested documents.

### Priority Deadlines

Fall .....	May 15
Spring .....	October 15
Summer.....	March 15

Generally, Federal Pell Grant funds may be used for the academic year beginning with Fall semester and ending with Spring Semester. Eligible students who attend in summer semester will be reviewed for remaining Pell Grant eligibility after the student registers for summer classes.

Part-time students may receive Federal Pell Grant. Federal Students Loans require a minimum enrollment of six eligible credit hours each semester.

The Financial Aid Office begins processing financial aid applications for the next academic year in the spring. It is suggested that students apply as early as possible.

Financial aid funds can only be used to pay toward courses that are required to complete the student's registered degree or certificate program.

Clark State can provide additional information about scholarships and deadline dates. This information is available on the Financial Aid page of the Clark State website or by calling the Financial Aid Office at 937-328-6034.

### Supporting Material

Additional documentation may be needed for certain situations or to comply with U.S. Department of Education verification requirements. The Financial Aid Office will advise students on what they need and this information will also be provided on the Financial Aid Self-Service portal. Students may also be required to confirm their identity and purpose of education.

### Determining Validity of High School Completion

Upon receipt of the high school completion documentation, Financial Aid staff confirms the diploma is valid. If there is reason to believe the diploma is inauthentic or granted by an ineligible post-secondary institution, further review may be necessary. Typically, validity is determined by confirming the high school's accreditation status with the agency that has jurisdiction over the high school. If unable to validate through the accrediting agency and/or if additional information is needed, the Financial Aid office performs due diligence with actions such as, contacting the high school for additional information, consulting with other post-secondary school leadership located in proximity to the high school in question.

### Eligibility Requirements

The federal program eligibility requirements are listed below:

- Generally, students must show financial need.
- Students need to have a high school diploma or GED. If they completed high school outside of the U.S., their diploma must be the equivalent of a U.S. high school diploma.
- Students are enrolled as a regular student in an eligible program.
- Students are a U.S. citizen or eligible non-citizen.
- Students meet financial aid satisfactory academic progress requirements.
- Students cannot be in default on a federal student loan nor owe an overpayment on federal aid grants.

Aid may be denied for several reasons: no need or insufficient demonstrated financial need, lack of institutional funds, failure to make satisfactory progress toward completion of the certificate or degree, exceeding the maximum credit hours for the certificate or degree, default on a federal student loan or failure to submit required documentation.

## Financial Aid Disbursements

When aid has been awarded, it can be disbursed as payment of tuition, fees and allowable books. A check for any surplus aid not used is either mailed to the student's home address or direct deposited into a bank account by request in the fifth week of the term. Students who totally withdraw may not receive any surplus funds, unless eligible for a calculated post-withdrawal amount.

## Federal Pell Grant

The Pell Grant is a federal assistance program designed to provide the foundation on which other aid can be built. As in any grant, it is a form of gift aid, which does not have to be repaid if the student completes the semester and earns academic credit. The amount of the award depends on the Expected Family Contribution (EFC) on the Student Aid Report and the number of credit hours for which a student enrolls. A student who has already earned a bachelor's degree is not eligible for this grant. During 2021-2022, the annual value of Pell Grants at Clark State ranged from \$672 to \$6,495 for part-time and full-time students, respectively.

## Federal Supplemental Educational Opportunity Grant (FSEOG)

This is a federal grant which provides assistance to eligible undergraduate students who have not earned a bachelor's degree. The maximum award by law is

\$4,000 per year; however, the amount of any individual award may be much less because of restricted funding. FSEOG awards must be targeted to exceptionally needy students with priority given to Pell Grant recipients.

## Federal DIRECT Subsidized Loan Program

This program offers long-term, interest-bearing loans made available to students through the Direct Lending loan program by the U.S. Department of Education to help pay for educational expenses. Repayment is made beginning six months after the borrower ceases to be at least a half-time student (enrolled in six credit hours). This program is open to all dependent and independent undergraduate students based on financial need.

Loan proceeds are usually sent to the College in multiple disbursements. First-year, first-time borrowers cannot receive the first loan payment until 30 days after the first day of their loan period. Arrangements must be made by the student to take care of tuition costs until loan proceeds are issued.

## Federal DIRECT Unsubsidized Loan Program

This loan program is available to dependent or independent undergraduate students regardless of family income. The term unsubsidized means that interest accrues (i.e., is not paid by the federal government) while the student is enrolled. The application process is the same as for the Federal Subsidized Loan Program.

Loan proceeds are sent to the college in the same manner as the subsidized loan program and the 30-day wait for new borrowers also applies.

## Parent Loan for Undergraduate Students (PLUS)

PLUS loans for dependent students are not need-based and are made regardless of income (pending credit approval). They are used to supplement needs not completely met by the Direct Loan programs. The interest rate of the loan is variable and is set by Congress.

The application process for the federal PLUS loan is online and does not carry a fixed loan limit but is limited to the cost of attendance minus other accepted aid. Parent borrowers must also submit the Parent PLUS Application and sign a Parent PLUS Master Promissory Note (MPN).

## Satisfactory Academic Progress

Clark State students are required to meet standards of academic progress while working toward a degree or certificate. The Financial Aid Office is required by the U.S. Congress and the U.S. Department of Education to enforce standards of academic progress for students who receive Federal Pell Grant, Federal SEOG, Federal Work-Study, Federal Direct Loans and Parent PLUS loans. This policy is applied to all financial aid applicants, regardless of whether they received financial aid previously.

Learn more at <https://www.clarkstate.edu/financial-aid/standards-of-satisfactory-academic-progress/>

## Credit Hour Requirements

Students need to successfully complete 2/3 or at least 66.67 percent of all hours attempted with grades of A, B, C, D, P or S. Grades of F, Z, W, I, U, UW and PG are not considered as successful completions. Students must also maintain a cumulative grade point average of at least 2.00.

Students must complete their program of study within 150 percent of the program length. Clark State credits and any transfer credits accepted by Clark State are included in the 150 percent timeframe maximums, also including withdrawals, non-completions and college preparatory credit hours. If a student changes majors within the same degree or certificate, they are still required to complete within the same maximum timeframe.

## Financial Aid Warning

Students who fail to complete 66.67 percent of their attempted hours and/or fall below the minimum GPA requirement are placed on financial aid warning. Aid is disbursed for one term only and is re-evaluated before the next term. Students must achieve a cumulative 66.67 percent completion rate of all attempted hours and meet a minimum 2.00 GPA requirement by the end of their warning term. The student's entire academic history at Clark State is included in the evaluation.



Students who fail to meet the requirements will be suspended from federal financial aid.

## Financial Aid Suspension

If the warning status is not removed in the above-specified manner, federal financial aid will be suspended. Students have an opportunity to appeal a suspension. If they do not appeal or their appeal is denied, they must successfully complete credit hours without the assistance of federal financial aid to achieve the required completion rate of 66.67 percent and cumulative GPA of at least 2.00 in order to aid eligibility. If students complete additional credit hours, they must contact the Financial Aid Office to have their academic progress recalculated. Students can still receive non-federal assistance.

## Financial Aid Appeals Process

If students lose their financial aid eligibility and feel there are mitigating circumstances, they may appeal in writing to the Financial Aid Office. If the appeal is granted, they will be placed on probation or on an academic plan.

If the student is placed on probation, the cumulative standards of 66.67 percent completion rate and cumulative GPA of 2.00 must be met by the end of the probation semester.

If the student is placed on an Academic Plan, the student must adhere to all requirements outlined in the Academic Plan. Minimum requirements are successful completion of 66.67 percent of attempted credit hours and a GPA of 2.00 at the end of the specified semester. Other additional restrictions may apply. Progress is evaluated at the end of each semester. The student may continue on the Academic Plan for subsequent semesters until the cumulative completion rate is at least 66.67 percent and cumulative GPA is 2.00.

If at the end of either the probation semester or any Academic Plan semester, the minimum standards are not met, the student will be suspended a second time. Once the cumulative minimum standards are achieved, the student will be considered to be making satisfactory academic progress. Student appeals will be reviewed by the Financial Aid office. Subsequent appeals will be considered and reviewed by the Satisfactory Academic Progress (SAP) Committee. Submission of an appeal does not guarantee approval.

The Fresh Start Program does not affect the Financial Aid Standards of Academic Progress Policy.

## Additional Degrees/Certificates

Students who have received one or more degrees or certificates and are returning for an additional degree or certificate must complete a New Degree Appeal in the Financial Aid Office to be considered for any further aid. The student will be notified of the new credit hour maximum limit for financial aid. Once the student has reached the new limit, financial aid will be terminated. Financial aid will be limited to only those classes required for the new degree or certificate.

## Work-Study Program

The federal work-study program provides part-time college employment if students have financial need. Students must be enrolled for at least six credit hours each term to be eligible to participate. To be considered for Summer employment, students must have a completed financial aid award for the upcoming year with federal work-study eligibility. The wage is no less than the federal minimum wage. Students may work up to 18 hours per week. The amount they may earn in a school year is determined by the amount of their financial need, other financial aid and availability of federal funds.

The college-funded work-study program provides part-time campus employment even if students do not show financial need (as they would for the Federal Work-Study Program). The wage rate and hours worked are the same as for the federal program.

Work-Study applications can be completed online at <https://www.clarkstate.edu/college-life/student-employment/>.

The Office of Career Services assists students with locating work-study opportunities on and off campus.

## College Preparatory Coursework

Students may receive federal financial aid payments for no more than 30 hours of non-credit college preparatory course work. This restriction holds for all the federal grants, loans and work-study. Students can, however, still receive federal financial aid payments for credit courses enrolled during same term as college preparatory courses.

## Repeated Coursework

Previously passed courses may be included when determining enrollment status for the term as long as it is not the result of more than one repetition of a previously passed course or any repetition of a previously passed course due to failing other coursework. Students who need to repeat coursework due to program requirements (i.e. Judicial Court Reporting Skills) should contact the Financial Aid Office for information.

## Withdrawals

Financial aid is based on the number of credit hours for which students are officially registered. They must notify the Financial Aid Office of any changes in enrollment.

If students add or drop credit hours, their financial aid will be automatically recalculated based on their level of enrollment. This recalculation will continue throughout the semester. Federal student aid may have to be reduced, returned to the U.S. Department of Education and the student may owe funds back to Clark State.

## Non-Attendance

Students that fail to attend class and actively participate within the first 8 days of the semester (reported by the class instructor) will be administratively withdrawn from the class. Tuition and fees for the class will be refunded and financial aid will be adjusted accordingly.

## Unofficial Withdrawals

Students who begin class but stop participating either by class attendance, online contact or assignments prior to completion of 70 percent of the term, and do not officially withdraw, will be considered an unofficial withdrawal. The student will receive a failing grade of UW on their transcript. In addition, a required federal financial aid recalculation will be completed and the student may owe funds back to Clark State.

## Financial Aid Return of Title IV Funds Policy

Any student receiving Federal Title IV funds will be subject to the policy below regarding the return of Federal Title IV funds:

Students who withdraw from all classes prior to completing more than 60 percent of the semester will have their eligibility for federal aid recalculated based on the percentage of the term completed, which shall be calculated as follows:

The percentage of the semester completed is the percentage of aid earned. This is calculated by the number of days the student attended divided by the number of calendar days in the payment period (i.e. semester). For example, if a student completely withdrew on the 20<sup>th</sup> day of the semester that is 114 days in length, the student would have only earned 17.5 percent of the aid received (20 divided by 114 = 0.175). Clark State and the student will be required to return to the federal aid programs the amount of aid received that was in excess of the aid “earned” for the period the student remained enrolled.

If the college returns funds to the Title IV aid programs, it could result in the student owing Clark State charges that were originally paid at the time of disbursement. Students may also be required to return funds released to them for personal expenses. Unearned federal aid will be returned in the following order: Federal Direct Loans (unsubsidized, then subsidized), Federal PLUS Loans, Federal Pell Grant and Federal SEOG.

Students who remain enrolled more than 60 percent of the payment period (semester) are considered to have earned 100 percent of the aid received and will not owe a repayment of Federal Title IV grant funds. Students who withdraw from current courses but still are enrolled in later term courses must inform the Financial Aid Office of their intent to attend or withdraw from the later starting courses.

\*Please note that students are responsible for any balance owed to Clark State as a result of the repayment of federal aid funds. For more information on the Financial Aid Refund Policy, please contact the Financial Aid Office.

Learn more online at <https://www.clarkstate.edu/financial-aid/return-of-title-iv-funds-policy/>

## Educational Costs

Cost of attendance includes both direct and indirect educational costs. Direct costs are tuition and fees. Indirect costs may include estimates for books, transportation, room and board and miscellaneous or personal expenses associated with being a student. These expenses will vary from student to student depending on a number of factors such as dependency status (as defined by federal and state programs), residency and credit hour enrollment. The total of all aid cannot exceed the student’s cost of attendance.

## SCHOLARSHIPS

Clark State offers a variety of scholarship opportunities. Applications are available on the Clark State's website.

### Clark State Foundation

The Clark State Foundation is a non-profit organization that provides support to the College and its students. The Foundation offers and administers scholarships funded by contributions from individuals, businesses, and organizations. Applications are available on the Clark State website. Deadlines for applying are stated on the application. Applications are reviewed by the Scholarship Review Committee. Foundation scholarships can be used for tuition, books and fees.

### College Credit Plus (CCP) Scholarship

Students that have completed at least 30 credit hours in College Credit Plus courses at Clark State with a 3.0 GPA at the completion of high school may qualify for the CCP scholarship. Students must maintain a 3.0 GPA while at Clark State. This scholarship covers tuition and general fees of \$1,500 each semester, up to two semesters (\$3,000 maximum). Scholarships will be awarded based on available funds.

### Tech Prep Scholarship

High School Tech Prep students graduating from a career center or high school in Clark, Champaign, Greene, Hardin or Logan County may apply for the Tech Prep Scholarship. Students must have a cumulative GPA of 2.25 and continue in the same Tech Prep pathway at Clark State to qualify for this \$3,000 scholarship. Deadline for applications is listed on our website at <https://www.clarkstate.edu/financial-aid/scholarships/>.

### Honors Program

Clark State College's Honors Program provides heightened student and faculty interaction and academically challenging coursework to high-achieving and motivated students. The Honors Program requires students to seek intellectual challenges, think critically, reflect upon experiences and assume more responsibility for their learning experience. A special Honors Program Distinction is earned by students who successfully complete four honors courses with a grade of B or higher. Students complete a slide presentation based on an honors project for each honors course. A team of judges evaluate the presentations and scholarships are awarded to eligible students with the highest-ranked presentations.

### Other Ohio Scholarships Available

#### Ohio National Guard Scholarship

The Ohio National Guard will pay a portion of instructional and general fees of its members approved for education. Application is made through the local Guard unit.]

#### Ohio Safety Officers College Memorial Fund

This program provides tuition assistance to the children and spouses of peace officers, fire fighters and certain other safety officers who are killed in the line-of-duty, anywhere in the United States.

It also provides assistance to the children and spouses of a member of the armed services of the US, who has been killed in the line of duty during Operation Enduring Freedom, Operation Iraqi Freedom or a combat zone designated by the President of the United States. Application is made through the Ohio Department of Higher Education State Grants and Scholarships Department.

#### Ohio War Orphans Scholarship

The State of Ohio awards scholarships for the partial payment of full-time instructional and general fees to dependent children of deceased or disabled Ohio war veterans. Application is made through the Ohio Department of Higher Education State Grants and Scholarships Department.

## STUDENT RECORDS

Our Records and Registration Office maintains student records. It also processes transcripts, diplomas and changes in student status such as name, address, residency and major. For more information, please contact the Records and Registration Office.

### Access to Educational Records

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their educational records. Students have the right to inspect and review their educational records within 45 days of the day the college receives a request for access. Students should submit to the Registrar written requests that identify the records(s) they wish to inspect. Students may request an amendment of their educational records if they believe it is inaccurate or misleading. Students should write the college department officially responsible for the record, clearly identify the part of the record they want changed and specify why it is inaccurate or misleading. If the problem is not resolved to the student's satisfaction, they may take the matter to the Assistant Vice President, Student Affairs and, in absence of resolution satisfactory to them, to a formal hearing in accordance with the college's established grievance procedures.

Students have the right to consent to disclosures of personally identifiable information contained in the student's educational records, except to the extent that FERPA authorizes disclosure without consent. One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests.

Students also have the right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. The name and address of the office that administers FERPA is Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, DC 20202-5920.

### Release of Information

Family Educational Rights and Privacy Act of 1974 as amended is designed to protect a student's privacy and their educational records. Clark State recognizes "Directory Information" as the following: student name, address, email address, telephone number, major, degrees and awards received participating in officially recognized activities and sports, weight and height of members of athletic teams, dates of enrollment, enrollment status and most recent previous educational agency or institution attended.

Students may request that their "Directory Information" not be released by signing a request to withhold information, available in the Records and Registration Office. The college will not release information to the newspaper concerning academic achievement if they have submitted a request.

## Transcripts

Students may order an official transcript of their academic records online, in person or by mail. There is a \$5 fee per transcript. (An additional nominal processing fee will be charged per recipient for online ordering.) Once a request is received, transcripts will, normally, be sent within 3-5 business days.

### Online

Clark State offers online transcript ordering, which allows for 24/7 ordering access, faster service, secure transactions, online order tracking and e-mail updates. For detailed information and a link to online ordering, visit the College website. A major credit card is required for online ordering.

### In Person

Transcripts may be ordered in person during normal business hours by completing a Transcript Request Form at the Beavercreek and Springfield locations.

### By Mail

It is strongly encouraged and recommended that students use online transcript ordering. If, however, that is not possible, students may send a written letter of request to: Records Office, Clark State College, PO Box 570, Springfield, Ohio 45501.

Written requests must contain all of the following information: Full, current name, previous name(s) used while attending Clark State, SSN or student identification number, date of birth, approximate years of attendance, a contact phone number where the student can be reached if there is a problem with the order, number of transcripts requested, name(s) and address(es) where the transcript is to be sent and the student's signature authorizing release of their transcript.

For in-person and mail orders, Clark State accepts cash, check, money order, VISA, MasterCard and Discover Card. Payment must accompany the transcript request.



# STUDENT SERVICES AND PROGRAMS

## Career Services

Sound career choices are based on knowledge about oneself and the world of work. Whether students are choosing a major, researching their chosen career field or preparing for their job search, Clark State will help them meet these challenges. We have a full range of services designed to assist students in exploring the wide range of personal and professional choices open to them and to find the career path that fits best. All Clark State students and alumni are encouraged to use the web-based resume referral service, self-assessment, career exploration and job search resources.

For assistance with career exploration, students may schedule an appointment with an academic advisor at the nearest location.

For assistance with resume writing, preparing for an interview, obtaining a co-op/internship, applying for jobs and many other career-related activities, students may call 937-328-6028. Resources are also available online at [clarkstate.edu/college-life/career-planning/](http://clarkstate.edu/college-life/career-planning/).

## College Library

The Clark State Library, located in the Sara T. Landess Technology and Learning Center, provides a variety of materials and services to students, faculty, staff and the community. The Library owns more than 35,000 books, 150 magazine and journal titles with electronic access to thousands more and over 2,000 media titles. In addition, through OhioLink, the library provides access to 17,000 periodicals and more than 49 million books, plus nearly 70,000 e-books. The library website includes links to the catalog and to OhioLink, as well as to other helpful tools. The website is <https://www.clarkstate.edu/academics/library/>.

A valid Clark State student identification card serves as the student's library card and entitles them to full borrowing privileges. A valid identification card also serves as a library card to other college and university libraries in Ohio.

Students can reserve small group study rooms, which have VCR/DVD players. Reservations need to be made four hours in advance.

The Paul Laurence Dunbar Library at Wright State University serves as the nearest library for students at the Beavercreek and Xenia locations. Students may access and utilize this library with a valid Clark State student ID.

OhioLink services are available at the Beavercreek location.

Requests for diplomas, transcripts, and registration for subsequent terms may be rejected due to Library obligations.

The Library is closed when the college is closed. Students may call 937-328-6022 or email [library@clarkstate.edu](mailto:library@clarkstate.edu) for more information.

## College Preparatory Support

College Preparatory Support courses emphasize reading, writing and mathematics and are designed to build skills so that students will succeed in college-level classes. Most of these support courses are taken concurrently with the college level math or English course. For students who have been away from the classroom for a number of years or do not have sufficient background in an area (for example in algebra or chemistry) then they may benefit from one or more of these support courses. Placement into these courses is determined by appropriate placement tests and by the student and academic advisor.

College Preparatory Support courses do not count toward graduation or in the transcript grade point average. They do, however, count in the calculation of full-time status, progress GPAs and are included in consideration for grants and other financial aid.

A College Preparatory Support course may be repeated once without permission. Permission to take a course a third or more times must be obtained from the dean of the academic school in the student's major.

## Cooperative Education

Cooperative education is a unique form of education which shows students how to use classroom learning in the workplace. This combination of classroom study and related, paid and supervised on-the-job training prepares students to join the workforce after graduation.

Clark State operates on a semester calendar. This allows students to be placed in a work site for approximately 15 weeks each semester. Most students prefer to work part-time (typically 20 hours per week) while carrying either full- or part-time coursework. Some students may prefer to work full time during the summer.

To participate in the Co-Op Program at Clark State, students must:

- Be a currently enrolled student with a GPA of at least 2.0 (some employers may have a higher GPA requirement),
- Successfully complete the course Employability Skills (EBE 1000) and
- Be committed to obtaining a degree from Clark State.

For more information, students may call the Career Services Coordinator at 937-328-6468.

## Counseling Services

Clark State has licensed professional counselors and a peer recovery support specialist available to assist students experiencing depression, anxiety, loss or stressful events.

Counseling is free and confidential (except in cases in which disclosure of information is necessary to protect students or others from physical or life-threatening danger) and no information will be released without written permission. Referrals to community agencies may be made when appropriate.

The Counseling Center is located in Rhodes Hall, Room 224. A counselor is also available on Mondays and Tuesdays at the Beavercreek location in room 109. Students may call 937-328-7961 to schedule an appointment. Students have the option of in person appointments (available at any campus location) or virtual counseling.

## **Mercy Health Springfield Primary Care at Clark State**

The Mercy Health clinic offers a full range of primary care services, prescriptions, immunizations, acute illness care and more. The clinic features three exam rooms and serves as the primary medical care facility for Clark State students, faculty and the community at large.

The college health service fee includes five clinic visits per student throughout the year when needed. These visits will include basic in-office testing such as strep, flu and pregnancy tests. One wellness check/physical is also included.

All Clark State students must present their student ID. To make an appointment, students may call 937-523-9280.

## **Office of Accessibility Services**

The Office of Accessibility Services is the official contact for students with any type of disability who request reasonable accommodations, auxiliary aides and/or services to provide equal opportunity for academic success. Disability staff serve as advocates for students and will assist them in achieving equal access to all college programs and services.

Students must self-disclose their disability and register with the Office of Accessibility Services in order to receive accommodations. Students may need to provide documentation of the disability such as an Individualized Education Plan (IEP), Multifactor Evaluation (MFE) or other testing information or a letter from a doctor or other licensed professional. Students are strongly encouraged to meet with an Accessibility Services staff member to determine eligibility for services. For more information, students may visit the website or contact the Office of Accessibility Services at 937-328-6019 or 937-431-7155.

## **Accommodations Related to a Pregnancy**

Students who are pregnant or recently have given birth may qualify for accommodations as covered by Title IX of the Education Amendments Act. For more information or to register for accommodations related to a pregnancy, students may contact the Office of Accessibility Services.

## **Office of Student Support**

The Office of Student Support provides support to students throughout their college career and helps them achieve their academic and personal goals. The Student Support Specialist coordinates referrals to campus and

community resources and offers follow-up support to address a variety of issues, including but not limited to, housing displacement, lack of childcare, transportation barriers, food insecurities and physical health/wellness.

Students are encouraged to self-refer to access support and assistance. Faculty and staff may make referrals if there is concern for a student's well-being.

## **TRIO Student Support Services**

TRIO is a federally funded college opportunity program designed to motivate and support students in their pursuit of a college degree. TRIO empowers students to reach their academic, personal and career aspirations.

TRIO offers students:

- Academic tutoring and instruction in various subjects, including math and English, as well as study skills
- Advice and guidance on majors and college course selection
- Information and instruction on financial and economic literacy
- Assistance with transfer to a four-year college/university
- Help completing the FAFSA and scholarship applications
- Guidance on choosing the right major for the best career
- Connection to campus and to community resources
- Opportunities to attend cultural activities such as plays, sporting events, museums and festivals

TRIO eligibility focuses on students who need academic support and meet one of the following qualifications: first-generation (those whose parents or guardians have not completed a bachelor's degree), financial need or documented disability.

For additional information, students may call or text 937-328-6122 or email [TRIO@clarkstate.edu](mailto:TRIO@clarkstate.edu). The TRIO application can be found on the Clark State website.

## **Success Center**

The Beavercreek location offers a Success Center located in Room 121. Services include testing, placement assessment, Accessibility Services and serves as the drop off and pick up location for OhioLink online orders.

## **Tutoring**

Tutoring is available by subject area free of charge to all Clark State students. Updated tutoring information can be found within the myClarkState portal by searching "tutoring." For more information about tutoring or to become a tutor, students may visit the Student Academic Support Center in the lower level of Rhodes Hall or the Beavercreek location.

## ACADEMIC POLICIES

The following sections are intended to be an overview of academic policies and procedures at Clark State. For more detailed information, contact the Records and Registration Office. The Vice President of Academic Affairs is ultimately responsible for developing and implementing academic policies.

### Academic Misconduct

Students are expected to behave as responsible members of the college community and to be honest and ethical in their academic work. Activities of academic dishonesty corrupt the process of acquiring the knowledge and developing the skills necessary for success in any profession; such activities are considered a violation of the Student Code of Conduct and are therefore prohibited. Students are responsible for understanding and abiding by the college academic integrity policy and definition of academic dishonesty as well as course and faculty-specific standards and expectations.

Cases involving academic dishonesty are handled within the academic school responsible for that course. Faculty and/or the academic school deans have the authority to issue a sanction up to a grade of zero for any assignment in which academic misconduct has occurred. In serious or repetitive incidences, the case will be referred to the Academic Incident Hearing Panel (AIHP) for further action. Such action may include issuing a failing grade for the course, probation, suspension and/or expulsion.

### Good Academic Standing

A student is considered to be in Good Academic Standing when their progress cumulative grade point average (GPA) remains at or above 2.00 and their progress term GPA remains at or above 1.00. Grades of "A", "B", "C", "D", "F" or "UW" are used to calculate a student's progress GPA. Progress GPAs are used to determine Academic Standing, which include grades earned in all courses, including College Preparatory Education, whereas the transcript GPA only includes grades for 1000-level courses and above.

Levels of Academic Standing	
Good Standing	At or above 1.00 AND at or above 2.00
Academic Intervention	Below 1.00 OR below 2.00
Academic Pause	No progress

### Academic Intervention

A student is placed on Academic Intervention when their progress term GPA is below 1.00 or their progress cumulative GPA is below 2.00. The College emails all students placed on Academic Intervention with an Academic Intervention Letter detailing their academic performance and directing them to complete an orientation for the required Academic Engagement

Program. Students on Academic Intervention meet with their Academic Advisor to schedule classes in the upcoming term. Students may take no more than 9 credit hours in fall/spring terms and no more than 6 during summer terms while on Academic Intervention. Students will work with an Academic Advisor to schedule their classes while on Academic Intervention.

**Academic Intervention Letter:** Students not meeting progress GPA requirements receive an Academic Intervention Letter via Clark State email stating that they have been placed on Academic Intervention and enrolled in the Academic Engagement Program. The letter outlines the student's progress as it relates to minimum academic standards set by the College.

**Academic Engagement Program (AEP):** Students on Academic Intervention are enrolled in the Academic Engagement Program. After completing the orientation, students develop an engagement plan with an Engagement Specialist. All engagement plans have scheduled check-ins to help determine if any changes are needed at that time.

- **First Semester on Academic Intervention:** Students on Academic Intervention are enrolled in the AEP and encouraged to utilize online and in-person services throughout the term that meet the requirements of the program. Students who do not return to Good Academic Standing will remain on Academic Intervention.
- **Second Semester on Academic Intervention:** Students on Academic Intervention are enrolled in the AEP and encouraged to utilize online and in-person services throughout the term that meet the requirements of the program. Students who complete the AEP requirements will be permitted to remain on Academic Intervention for a third semester. Students who do not complete the AEP requirements, will be placed on Academic Pause with the opportunity to appeal.
- **Subsequent Semesters on Academic Intervention:** Students continuing on Academic Intervention are enrolled in the AEP and encouraged to utilize online and in-person services throughout the term that meet the requirements of the program. Students continuing on Academic Intervention will be re-enrolled in the AEP, encouraged to meet with an Engagement Specialist and complete the program.
- Students who do not return to Good Academic Standing will be placed on Academic Pause with the opportunity to appeal.
- Students who return from Academic Pause will be re-enrolled in the AEP. If progress GPA requirements are not met within return semester, student will be placed on Academic Pause with the opportunity to appeal.
- Students who return from Academic Pause will be re-enrolled in the AEP. If progress GPA requirements are not met, but the student completes the requirements of AEP, they will be placed on Academic Intervention.

- Students who choose not to complete the AEP, must earn a progress term GPA of 1.0 or above in order to be placed on Continued Academic Intervention OR a cumulative progress GPA of 2.0 or above to be in Good Academic Standing.

## Academic Pause

A student is placed on Academic Pause when their most recent progress term GPA is below 1.00 or their progress or cumulative GPA remains below 2.00 after completing three full semesters on Academic Intervention and not completing the requirements of the Academic Engagement Program. Academic Pause is limited to one academic semester. The college emails all students placed on Academic Pause with an Academic Pause Letter detailing their academic performance and inviting them to complete an Academic Pause Appeal form within two (2) business days of notification.

**Academic Pause Appeal:** Students placed on Academic Pause can complete an Academic Pause Appeal form to be considered eligible to return without taking a one semester pause before registering for courses. Academic Pause Appeal forms are due two (2) business days after notification of pause status and are reviewed by the Academic Pause Appeal Committee; made up of representatives from the academic dean's office and the Academic Engagement Program. The committee's response will be issued no later than two (2) business days prior to the upcoming semester. Note: Students placed on Academic Pause may also be placed on Financial Aid Warning or Suspension.

- Approved: Students whose appeals are approved by the Appeal Committee are permitted to take classes in the upcoming semester and continue on Academic Intervention. Students must meet with their Advisor to be registered for classes. The Appeal Committee will notify Records to change the registration hold.
- Denied: Students whose appeals are not approved by the Appeal Committee must sit out for one semester and will be able to register for the following semester(s).

## Advanced Placement Credit Award

The State of Ohio, working through the University System of Ohio, has initiated policies to facilitate the ease of transition from high school to college as well as between and among Ohio's public colleges and universities.

As of fall Term 2009, students obtaining an Advanced Placement (AP) exam score of three or above are awarded the aligned course(s) and credits for the AP exam area(s) successfully completed. General Education courses and credits received will be applied towards graduation and will satisfy a general education requirement if the course(s) to which the AP area is equivalent fulfill a requirement.

If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be

applied toward graduation where such elective credit options exist within the academic major.

Additional courses or credits may be available when a score of four or five is obtained. Award of credit for higher score values vary depending on the institution and academic discipline.

In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics – STEM) students are strongly advised to confer with the college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.

## Attendance

Achievement of academic goals is best accomplished through regular class participation. Therefore, students are urged to attend all class and laboratory sessions. When unavoidable absences do occur, students should take the responsibility to contact their instructor to make arrangements for work that has been missed. Instructors have the right to issue a failing grade (UW or F) if students incur excessive absences and have not officially withdrawn from a course. Specific information concerning attendance is available in the course syllabus.

The college is required to report non-attendance to federal and state agencies that provide financial assistance to students. Failure to attend classes may also result in having to repay part or all of an allowance from the Veterans Administration or state or federal agencies.

## Dean's List

If students carry a minimum of six credit hours of college courses and maintain a transcript grade point average of 3.5 or better for a semester's work, they will be enrolled on the dean's list in recognition of achievement that semester. Grades of "satisfactory" and grades in college preparatory courses are not included in determining the grade point average.

Note: Dean's list acknowledgement does not prevent an Academic Standing of Intervention.

## Definition of Credit Hour

All academic credits are expressed in terms of credit hours. Clark State defines a credit hour based on the requirements of the Ohio Department of Higher Education.

## Graduation Process

Students will receive an email from Records and Registration during the term in which a student is enrolled in the final courses needed to complete their degree or certificate. This email will confirm that the student has registered for the necessary courses and that pending successful completion of those courses, can expect to receive their diploma or certificate at the end of the term.



Once courses have been successfully completed and confirmed by Records and Registration, students will be graduated. They will receive their diploma or certificate through the US Mail approximately eight weeks after the end of the term.

Important things for the graduating student to do prior to/during their last term:

- Check with academic advisor / faculty advisor to ensure that all requirements for degree/certificate will be met by the end of the term in which they wish to complete. Students must also insure that required course substitutions (if any) have been submitted and processed.
- Check Clark State Student email regularly.
- Verify that Records and Registration has a current mailing address.

## Grade Reports

Students can access final grades through Self-Service Student Planning. Grades will not be released over the phone. Students may request an official transcript in the Records and Registration Office or online. If students have a concern about a grade, they should discuss it with their instructor within eight weeks after the end of the semester. If the grade was for a spring or summer term class, students should discuss it with their instructor by the eighth week of fall semester. If the problem is still not resolved, students may discuss it with the academic school dean and then with the Vice President of Academic Affairs.

## Graduation Requirements

To qualify for a degree, students must pass all required courses for their major and have a transcript grade point average of at least 2.0. Students in the following majors must have a C as a minimum grade in all required major courses: Early Childhood Education, Emergency Medical, Medical Assisting, Medical Laboratory, Practical Nursing, Registered Nursing, Physical Therapist Assistant, Social Services and Diagnostic Medical Sonography. Students who graduate from the Registered Nursing program in 2013 or after will be required to have a C or greater in all courses in the curriculum. Students in the Judicial Court Reporting program must have passed each of the terminal speed courses within 12 months prior to graduation.

All students are expected to complete the residency requirement of 30 semester hours remaining before completing a bachelor's degree, at least 15 credit hours of coursework at Clark State for an associate degree or 12 credit hours for a one-year certificate program. Credit equivalencies, such as articulated, experiential, transfer or proficiency credit do not count toward the residency requirement. Credit equivalencies may not exceed one half of the required technical course credits for the degree or certificate program being pursued unless recommended by the faculty and approved by the academic school dean. All financial obligations to the college (instructional fees, general fees, laboratory fees, technology fees, library

fees, parking fines, etc.) must be paid and all college equipment returned before grades or a diploma will be issued by the college.

Effective fall semester 2023, for a student to earn multiple degrees at Clark State, the degree programs must be at least 6 credit hours different for a one-year certificate, 12 credit hours different for an associate degree and 24 credit hours different for a bachelor degree. If a student qualifies for more than one certificate/degree during the same semester using the same curriculum, the certificate/degree will default to the chosen major on record unless the college is otherwise notified by the student.

## Grading System

Academic achievement is indicated by the following grades and points used in calculating grade point average:

A-Excellent	(4 grade points per credit hour)
B-Good	(3 grade points per credit hour)
C-Average	(2 grade points per credit hour)
D-Poor	(1 grade point per credit hour)
F-Failing	(0 grade points per credit hour)
UW-Unofficial Withdrawal*	(0 grade points per credit hour)

\*Student stops attending class prior to completion of 70 percent of the term, but never officially withdraws from the course.

Students' transcript GPA is obtained by dividing the total number of grade points earned in college credit courses by the total number of credit hours attempted in those courses. For example, consider the following grades earned by a student:

	<i>Credit Hours</i>	<i>Grade</i>	<i>Points</i>
Course 1	3	B	9
Course 2	3	C	6
Course 3	4	B	12
Course 4	3	C	6
<b>Totals</b>	<b>13</b>	<b>33</b>	

The total number of grade points, 33, is determined by adding together the points earned in each course (credit hours x grade points). That number is then divided by the total number of credit hours, 13, to determine the grade point average. In this example the average is  $33/13 = 2.538$ , 2.53.

Grades issued for college preparatory courses are not counted in students' transcript grade point average. A transcript grade point average refers to the average for all college credit courses taken during enrollment at the college. There are other symbols that can be issued for which no points are associated:

S.....	Satisfactory
U.....	Unsatisfactory
I.....	Incomplete
PR.....	Proficiency
CR.....	Credit
NC.....	No Credit
EX.....	Experiential Credit

TR.....Transfer Credit  
 AR.....Articulated Credit  
 W.....Withdrawal  
 X.....Audit  
 N.....No Grade Reported (Records Office use only)

## Incomplete

Students with extraordinary circumstances may be considered for an incomplete grade if they have completed approximately 70% of the work required for a course and have a passing grade on work already completed. For an incomplete grade that is granted, a student will have additional time to complete the required work according to an agreed upon timeline with the instructor within the maximum time allowed. Any fall incomplete grade not changed before Friday of the eighth week of spring semester and any spring or summer incomplete grade not changed before Friday of the eighth week of fall semester will automatically be changed to an F on the student's transcript.

Another instance when the Incomplete "I" grade may be awarded is in the case of a Title IX Course Extension Plan. As a result of a pregnancy related need or event, students may need to pause their course work at some point within a semester for a length of time determined by their doctor in documentation provided to OAS. These students will be permitted to complete the classes they were enrolled in at the time of the pause provided approximately 70% of the work required for a course is completed with a passing grade on work already completed. Final due dates follow the college's Incomplete process outlined above unless additional medical documentation is provided.

## Military Personnel – Active Duty, Guards and Reservists with Orders to Deploy

Students who receive orders to deploy have the option to withdrawal from classes with a tuition refund, complete the course within a year and a semester (an incomplete grade is assigned) or choose to receive a "final grade" dependent upon supportive documentation, class performance and time of request.

The student will receive a full refund of tuition and fees paid to Clark State if the time of the request is prior to the last day to drop classes of that term.

The student will have a choice of two options if the request to withdraw is received after the last day to drop classes of that term:

1. If the student does not reach the  $\frac{3}{4}$  point of the term, they will be backdated out of the term and all Tuition Assistance paid will be reimbursed to the entity that paid it. OR;
2. If the student has completed at least 75% of the class, with the instructor's approval, a "Final Grade" for the course may be assigned. The decision to allow assignment of a "Final Grade" is solely the decision of the instructor for the course. OR;

3. If the student receives orders to deploy and reaches an agreement with the instructor(s) to assign an incomplete, the student will have up to one calendar year and 1 academic semester following the end of the semester that the incomplete was assigned to complete any coursework. An incomplete grade in a course allows students the right to complete all coursework without further payment of tuition or fees.

## Participation in Commencement

Students earning a degree or one-year certificate will be offered the opportunity to participate in Clark State's annual Commencement Ceremony held at the end of Spring Semester. Information about the ceremony will be sent to participants approximately 30 days before the ceremony. Degree and certificate recipients who will graduate during fall through summer terms are eligible to participate in the May Commencement Ceremony.

## Registration after Academic Pause

Students who sit out for a semester due to Academic Pause, will be permitted to register with an Academic Advisor for the next semester's classes. Students returning after Academic Pause will be enrolled in the Academic Engagement Program and will be given one semester after a Pause to make improvements and placed on another semester of Academic Pause, if performance does not improve.

## Student Classification

Students are considered a full-time student when they are enrolled in at least 12 credit hours. If students carry 11 credit hours or less per term, they are part-time.

Students are first-year students if they are registered in a degree or certificate program and have earned fewer than 30 semester hours of credit, including transfer credit. Students are second-year students once they have earned 30 or more semester hours in a degree or certificate program. Students are third-year students once they have completed 60 or more semester hours of credit in a bachelor's degree program, including transfer. Students are considered fourth-year students once they have completed 90 or more semester hours of credit in a bachelor's degree program, including transfer.

# PROGRAM LISTING / CAMPUS KEY

## Key

- E** - Online
- G** - Beaver Creek
- K** - Xenia
- L** - Bellefontaine
- S** - Springfield (Springfield CTC, Leffel Lane or Downtown Springfield)
- \*** - Start here, finish there (Transfer Degree)

## Agriculture

### Degrees

- Ag Bus-Agricultural Engineering Technologies Option ---- S
- Agricultural Business - Agricultural Engineering Technology Option ---- S
- Horticulture Industry -- S
- Precision Agriculture ---- S
- Precision Agriculture - Technician Option ---- S

### Certificates

- Precision Agriculture Short-Term Technical Certificate ---- S
- Weed and Plant Pest Management Short-Term Technical Certificate - S

## Digital Arts

### Degrees

- Graphic Design ---- S
- New Media ---- S
- New Media - Web Design Option ---- S

### Certificates

- New Media Web Design Departmental Certificate ---- S
- Social Media Marketing Departmental Certificate ---- S

## Bachelor's Degrees

- Manufacturing Technology Management - Manufacturing Engineering Technology Concentration ---- S
- Manufacturing Technology Management - Computer-Aided Design Concentration ---- S
- Manufacturing Technology Management - Industrial Technology Concentration ---- S
- Manufacturing Technology Management - Mechanical Engineering Technology Concentration ---- S
- Web Design and Development - Web Design Concentration -- S
- Web Design and Development - Web Development Concentration ---- S
- Addictions and Integrated Treatment Studies ---- G, S

## Business

### Degrees

- General Transfer - Business Pathway ---- G, S
- Accounting ---- E, G, S
- Business Transfer - Central State University ---- G, S
- Business Transfer - Wright State University ---- G, S
- Judicial Court Reporting ---- E
- Management ---- E, G, L, S
- Management - Human Resource Management Option - E, G, S
- Management - Logistics and Supply Chain Management Option ---- E, G, S
- Management - Marketing Option ---- E, G, S
- Management - Real Estate Broker Option ---- E, G, S
- Office Administration ---- G, S
- Legal Studies ---- \*
- Professional Services Management ---- E, G, S

### Certificates

- Accounting Certificate ---- E, G, S
- Accounting Executive Option Departmental Certificate - E, S
- Banking Departmental Certificate ---- E
- Communication Departmental Certificate ---- S
- Consumer Lending Departmental Certificate ---- E
- Customer Service Short-Term Technical Certificate -- E, G, S
- Human Resource Management Departmental Certificate - E, G, S
- Judicial Court Reporting- Captioning/CART Career-Enhancement Certificate ---- E
- Lean Six Sigma Yellow-Green Belts Short-Term Technical Certificate ---- E
- Logistics and Supply Chain Management Departmental Certificate ---- E, G, S
- Management Certificate ---- E, G, S
- Marketing Departmental Certificate ---- E, G, S
- Professional Digital Reporter Certificate ---- E
- Professional Office Administration Certificate ---- E, G, S
- Property Insurance Claims Short-Term Technical Certificate -- E
- Real Estate Short-Term Technical Certificate ---- E, S
- Small Business Departmental Certificate ---- E, S
- Supervisory Departmental Certificate ---- E, G, S
- Supply Chain Management Departmental Certificate -- G, S

## Computer and Information Technology

### Degrees

- Computer Networking ---- G, S
- Computer Networking - Technical Systems Support Option --G, S
- Computer Software Development ---- G, S
- Computer Software Development - Cybersecurity Option -- G, S
- Computer Software Development - Web Development Option ---- E, G, S
- Cybersecurity/Information Assurance Technology ---- G, S
- GIS/Geospatial Technology ---- E, G
- Information Services: Library Paraprofessional ---- \*
- Modeling and Simulation Engineering Technology ---- G, S

## Certificates

Computer Programming Departmental Certificate ---- E, G, S  
Cybersecurity Short-Term Technical Certificate ---- E, G, S  
Cyber-Networking Technical Certificate ---- E, G, S  
Cybersecurity Foundations Short-term Technical Certificate  
---- E, G, S  
Geospatial Precision Agriculture Specialist Short-Term  
Technical Certificate ---- S  
Network Administration Short-Term Technical Certificate -- E, G, S  
Network Administrator Short-Term Technical Certificate -- E, G, S  
Network Foundations Short-Term Technical Certificate -- E, G, S  
Network Infrastructure Short-Term Technical Certificate -- G, S  
Network Support Short-Term Technical Certificate ---- E, G, S  
Technical Support Short-Term Technical Certificate ---- G, S  
Web Development Departmental Certificate ---- E, G, S  
UAS Operations and GIS Image Analysis Departmental  
Certificate ---- G, S

## Education

### Degrees

Early Childhood Education ---- S  
Teacher Education Transfer ---- G, S

## Engineering, Manufacturing and Mechanical Services

### Degrees

Computer-Aided Design Technology ---- S  
Diesel Technology Program ---- L  
Heating, Ventilation, Air Conditioning and Refrigeration  
(Clark County CTC) ---- S  
Industrial Technology ---- L, S  
Manufacturing Engineering Technology ---- S  
Manufacturing Engineering Technology - Laser Machining  
Option ---- S  
Manufacturing Engineering Technology - Laser Maintenance  
Option ---- S  
Mechanical Engineering Technology ---- S

### Certificates

Additive Manufacturing Short-Term Technical Certificate -- S  
Computer-Aided Design Architectural Short-Term Technical  
Certificate ---- S  
Computer-Aided Design - Architectural Technical  
Certificate ---- S  
Computer-Aided Design Manufacturing Technical  
Certificate ---- S  
Computer-Aided Design Manufacturing Short-Term  
Technical Certificate ---- S  
Computer Numerical Control (CNC) Technical Certificate -- S  
Computer Numerical Control (CNC) Short-Term Technical  
Certificate ---- S  
Computer Numerical Control (CNC) - LATHE Short-Term  
Technical Certificate ---- S  
Computer Numerical Control (CNC) - MILL Short-Term  
Technical Certificate ---- S

Diesel Technology Short-Term Technical Certificate ---- L  
Heating, Ventilation, Air Conditioning and Refrigeration  
Departmental Certificate (Clark County CTC) --- S  
Electrical Systems Short-Term Technical Certificate ---- K, S  
HVAC EPA 608 Short-Term Technical Certificate ---- S  
HVAC-R Basic Electrical Short-Term Technical Certificate -- S  
Hydraulic Systems Short-Term Technical Certificate ---- S  
Industrial Maintenance Short-Term Technical Certificate - L, S  
Laser Additive Short-Term Technical Certificate ---- S  
Laser Beam Welding Short-Term Technical Certificate ---- S  
Laser Foundations Short-Term Technical Certificate ---- S  
Laser Machining Short-Term Technical Certificate ---- S  
Laser Machining Technical Certificate ---- S  
Laser Maintenance Short-Term Technical Certificate ---- S  
Laser Maintenance Technical Certificate ---- S  
Manufacturing Foundations Short-Term Technical  
Certificate ---- S  
Mechanical Systems Short-Term Technical Certificate ---- S  
Ohio Manufacturing Short-Term Technical Certificate ---- S  
Pneumatic Systems Short-Term Technical Certificate ---- K, S  
Process Control Short-Term Technical Certificate ---- S  
Robotics Departmental Certificate ---- S  
Semiconductor Maintenance Technician Technical  
Certificate ---- S  
Semiconductor Technician Short-Term Technical Certificate -- S  
Supervisory Control and Data Acquisition (SCADA)  
Departmental Certificate ---- S  
Welding Short-Term Technical Certificate ---- S

## Health

### Degrees

Healthcare Concentration Transfer ---- G, K, S  
Healthcare Concentration Transfer ---- G, K, S  
Health Sciences ---- G, L, S  
Diagnostic Medical Sonography ---- S  
Medical Assisting ---- K, S  
Medical Laboratory Technology ---- S  
Multi-Skilled Healthcare Associate of Technical Studies - G, K, S  
Occupational Therapy Assistant (Consortium Program) --- \*  
Office Administration - Medical Office Administration Major - G, L, S  
Physical Therapist Assistant ---- S  
Radiographic Imaging (Consortium Program) ---- \*  
Registered Nursing ---- G, S  
Registered Nursing - Evening / Weekend ---- G, S  
Registered Nursing - LPN to RN Transition ---- G, S  
Registered Nursing - Paramedic to RN Transition ---- G, S  
Respiratory Care (Consortium Program) ---- \*

### Certificates

Advanced Medical Coding Short-Term Technical Certificate - G, S  
Clinical Medical Assisting Short-Term Technical Certificate - K, S  
Electrocardiography Short-Term Technical Certificate -- G, S  
Health Information Technology Departmental Certificate - G, L, S  
Medical Assisting Certificate ---- K, S  
Medical Coding Short-Term Technical Certificate ---- G, K, S



Multi-Skilled Healthcare Certificate ---- G, S  
 Nurse Aide Short-Term Technical Certificate ---- G, L, S  
 Paramedic Certification for Registered Nurses ---- S  
 Patient Care Technician Short-Term Technical Certificate - G, S  
 Phlebotomy Short-Term Technical Certificate --- G, S  
 Practical Nursing Certificate ---- G, L, S  
 Practical Nursing Certificate - Evening Weekend ---- G, L, S

## Social Science/Human Services and Public Safety

### Degrees

Addiction and Recovery Services ---- G, S  
 Criminal Justice Technology-Corrections ---- G, S  
 Criminal Justice Technology - Law Enforcement ---- G, S  
 Emergency Medical Services ---- S  
 Social Work Assistant ---- G, S  
 Social Work Transfer - Wright State University ---- G, S  
 General Transfer – Social Services Pathway ---- G, S

### Certificates

Basic Peace Officer Academy ---- S  
 Chemical Dependency Short-Term Technical Certificate - G, S  
 EMT Short-term Technical Certification ---- G, S  
 Firefighter I Short-Term Technical Certification ---- L, S  
 Firefighter II Short-Term Technical Certification ---- L, S  
 Firefighter / Transition Departmental Certificate ---- L, S  
 Firefighter / Volunteer Departmental Certificate ---- L, S  
 Paramedic Certification ---- L, S  
 Peer Support/Addiction & Recovery Short-Term Technical Certificate ---- G, S  
 Peer Recovery Support Short-Term Technical Certificate - G, S

## Theatre

### Degrees

Entertainment Technology ---- S  
 General Transfer – Theatre Pathway ---- S

### Certificates

Arts Administration Departmental Certificate ---- S

## Transfer Pathways

### Degrees

General Transfer – Biology Pathway ---- S  
 General Transfer – Communication Pathway ---- G, S  
 General Transfer – Economics Pathway ---- G, S  
 General Transfer – English Pathway ---- G, S  
 General Transfer – Geography Pathway ---- G, S  
 General Transfer – Geology Pathway ---- G, S  
 General Transfer – History Pathway ---- G, S  
 General Transfer – Mathematics Pathway ---- S  
 General Transfer – Physics Pathway ---- S  
 General Transfer – Political Science Pathway ---- G, S  
 General Transfer – Psychology Pathway ---- G, S  
 General Transfer – Sociology Pathway ---- G, S



# Degrees and Certificates

# AGRICULTURE AND FOOD SCIENCE

## Agricultural Business

The Agricultural Business program emphasizes preparation for agriculture service-industry occupations. Courses are offered in soil science, soil fertility, animal science, pest management, sales, business management, and marketing. The curriculum is designed to prepare students for employment in the business world of agriculture sales and service. Graduates of this program will find technical and entry-level management positions in crop-care companies, feed-and-livestock product companies, and many other businesses that serve the producer with goods and services.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Agricultural Business Technology, a graduate will be able to:

- Identify plant nutrient deficiencies and describe corrective measures.
- Identify major plant pests, including weeds, insects, and diseases and describe corrective measures.
- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Demonstrate effective employability skills.
- Demonstrate basic trouble shooting and maintenance skills for small gas engines.
- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena, and make predictions.

### Scholastic Preparation

High school chemistry, biology, geometry, algebra, and keyboarding skills are strongly recommended.

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
AGR 1750	Precision Agriculture	3
ENG 1111	English I	3
<b>Spring</b>		
AGR 1150	Plant Science	4
AGR 1250	Animal Agriculture	3
AGR 2000	Co-op Experience in Ag Business Part I	1
ACC 1000	Accounting Concepts	3
ENG 2211	Business Communication	or
ENG 2230	Technical Report Writing	3
MTH 1200	Technical Math for Agriculture	3
<b>Summer</b>		
AGR 2001	Co-op Experience in Ag Business Part II	1
<b>Fall</b>		
AGR 2200	Crop Production	3
AGR 2601	Weed Science	3
AGR 2700	Ag Business Management	4
- -	Arts & Humanities Elective *	3
- -	Social & Behavioral Science Elective*	3
<b>Spring</b>		
AGR 2602	Plant Pathology	2.5
AGR 2603	Plant Insect Pests	2.5
AGR 2775	Ag Marketing and Trade	3
AGR 2800	Equipment Management, Maintenance & Repair	4
AGR 2850	Agricultural Capstone Seminar	3
Total Credit Hours		63

\*At least one must be a global awareness (GA) course. Select from social/behavioral sciences or arts/humanities courses identified in the Catalog as General Education for technical programs.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional terms of study. Students should consult their academic advisor for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Agricultural Business - Agricultural Engineering Technology Option

The Agricultural Engineering Technology option emphasizes preparation for agriculture service-industry occupations, especially those with a mechanical emphasis. Courses are offered in powered equipment maintenance, facility maintenance and construction, landscape construction, soil science, soil fertility, sales, and business management. The curriculum is designed to prepare students for employment in the business world of agriculture sales and service. Graduates of this program will find technical and entry-level management positions in careers with a mechanical emphasis in the agricultural industry.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in the Agriculture Engineering Technology option, a graduate will be able to:

- Identify plant nutrient deficiencies and describe corrective measures.
- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Demonstrate effective employability skills.
- Demonstrate the proper care of established plants in the landscape.
- Demonstrate basic trouble shooting and maintenance skills for small gas engines.
- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.

### Scholastic Preparation

High school chemistry, biology, geometry, algebra, and keyboarding skills are strongly recommended.

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
AGR 1650	Landscape Maintenance and Construction	4
ENG 1111	English I	3
<b>Spring</b>		
AGR 1150	Plant Science	4
AGR 1800	Welding	4
AGR 2002	Co-op Experience in Ag Engineering Part I	1
ENG 1112	English II	or 3
ENG 2211	Business Communication	3
MTH 1280	College Algebra	4
<b>Summer</b>		
AGR 2003	Co-op Experience in Ag Engineering Part II	1
<b>Fall</b>		
AGR 1750	Precision Agriculture	3
AGR 2700	Ag Business Management	4
INT 1210	Pneumatics I	1
INT 1220	Pneumatics II	1
INT 1240	Hydraulics I	1
INT 1250	Hydraulics II	1
INT 1310	AC/DC Electrical Systems	2
- -	Arts & Humanities Elective *	3
<b>Spring</b>		
AGR 2450	Irrigation Systems	3
AGR 2800	Equipment Management, Maintenance & Repair	4
AGR 2850	Agricultural Capstone Seminar	3
- -	Social & Behavioral Science Elective	3
- -	AGR Elective**	3
Total Credit Hours		64

\* At least one must be a global awareness (GA) course. Select from social/behavioral sciences or arts/humanities courses identified in the Catalog as General Education for technical programs.

\*\* AGR elective may be any AGR course not required above. AGR 1700, 1750, 1800, 2300, 2450 are recommended. Other course work may be approved by the school.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional terms of study. Students should consult their academic advisor for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.



## Horticulture Industries - Golf Course Operations Option

The Horticultural Industries program provides basic preparation for careers in the landscape and turfgrass industries. The campus grounds, including a greenhouse facility and a one-hole golf course, act as a working laboratory to give students practical training. Clark State students can specialize in golf course operations as they apply to maintaining the golf course leading to a career in the golf course industry.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in the Golf Course Operations option, a graduate will be able to:

- Identify plant nutrient deficiencies and describe corrective measures.
- Identify major plant pests, including weeds, insects and diseases and describe corrective measures.
- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Demonstrate effective employability skills.
- Identify common landscape plant materials.
- Demonstrate the proper care of established plants in the landscape.
- Demonstrate basic trouble shooting and maintenance skills for small gas engines.
- Write clearly and accurately in variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.

### Scholastic Preparation

High school chemistry, biology, geometry, algebra, and keyboarding skills are strongly recommended.

### Transfer Options

Students enrolled in Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
AGR 1750	Precision Agriculture	3
ENG 1111	English I	3
<b>Spring</b>		
AGR 1150	Plant Science	4
AGR 2012	Co-op Experience in Golf Course Ops Part I	1
AGR 2800	Equipment Management, Maintenance & Repair	4
ENG 1112	English II	or
ENG 2211	Business Communication	3
MTH 1200	Technical Math for Agriculture	3
- -	Arts/Humanities Elective*	3
<b>Summer</b>		
AGR 2013	Co-op Experience in Golf Course Ops Part II	1
<b>Fall</b>		
AGR 1201	Pesticide Safety and Application	1
AGR 1400	Turfgrass Science	3
AGR 1650	Landscape Maintenance and Construction	4
AGR 2601	Weed Science	3
AGR 2700	Ag Business Management	4
<b>Spring</b>		
AGR 2450	Irrigation Systems	3
AGR 2602	Plant Pathology	2.5
AGR 2603	Plant Insect Pests	2.5
AGR 2850	Agricultural Capstone Seminar	3
- -	Social/Behavioral Science Elective*	3
Total Credit Hours		62

\* At least one must be a global awareness (GA) course. Select from social/behavioral sciences or arts/humanities courses identified in the Catalog as General Education for technical programs.

A complete listing of humanities and social science electives is available in the College Catalog.

## Horticulture Industries - Landscape Design Option

The Horticultural Industries program provides basic preparation for careers in the landscape and turfgrass industries. The campus grounds, including a greenhouse facility and a one-hole golf course, act as a working laboratory to give students practical training. Clark State students can specialize in landscape design. Landscape plant materials, design, and computer-aided design are emphasized leading to careers in the landscape industry.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in the Landscape Design option, a graduate will be able to:

- Identify plant nutrient deficiencies and describe corrective measures.
- Identify major plant pests, including weeds, insects and diseases and describe corrective measures.
- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Demonstrate effective employability skills.
- Identify common landscape plant materials.
- Demonstrate the proper care of established plants in the landscape.
- Write clearly and accurately in variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.

### Scholastic Preparation

High school chemistry, biology, geometry, algebra, and keyboarding skills are strongly recommended.

### Transfer Options

Students enrolled in Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
ART 1111	Drawing I	3
ENG 1111	English I	3
<b>Spring</b>		
AGR 1150	Plant Science	4
AGR 1500	Landscape Design	4
AGR 2014	Co-op Experience in Landscape Design Part I	1
ENG 1112	English II	or 3
ENG 2211	Business Communication	3
MTH 1200	Technical Math for Agriculture	3
<b>Summer</b>		
AGR 2015	Co-op Experience in Landscape Design Part II	1
<b>Fall</b>		
AGR 2100	Woody Plant Materials	4
AGR 2601	Weed Science	3
AGR 2700	Ag Business Management	4
- -	Arts/Humanities Elective *	3
<b>Spring</b>		
AGR 2150	Herbaceous Plant Materials	3
AGR 2500	Advanced Landscape Design	4
AGR 2850	Agricultural Capstone Seminar	3
- -	Social/Behavioral Science Elective*	3
- -	AGR Technical Elective**	3
Total Credit Hours		60

\* At least one must be a global awareness (GA) course. Select from social/behavioral sciences or arts/humanities courses identified in the Catalog as General Education for technical programs.

\*\*AGR elective may be any AGR course not required above. AGR 1650, 1750, 2300, 2450 are recommended. Other course work may be approved by the school. A complete listing of humanities and social science electives is available in the College Catalog.

## Horticulture Industries - Natural Resources Option

The Horticultural Industries program provides basic preparation for careers in the landscape and turfgrass industries. The campus grounds, including a greenhouse facility and a one-hole golf course, act as a working laboratory to give students practical training. Clark State students can specialize in parks and recreation operations. Tree and shrub identification, landscape maintenance, turf science, and communication skills are emphasized leading to careers in the parks and recreational industry.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in the Natural Resources option, a graduate will be able to:

- Identify plant nutrient deficiencies and describe corrective measures.
- Identify major plant pests, including weeds, insects and diseases and describe corrective measures.
- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Demonstrate effective employability skills.
- Identify common landscape plant materials.
- Demonstrate the proper care of established plants in the landscape.
- Demonstrate basic trouble shooting and maintenance skills for small gas engines.
- Write clearly and accurately in variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.

### Scholastic Preparation

High school chemistry, biology, geometry, algebra, and keyboarding skills are strongly recommended.

### Graduation Requirements

A complete listing of humanities and social science electives is available in the College Catalog.

### Transfer Options

Students enrolled in Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
AGR 1650	Landscape Maintenance and Construction	4
AGR 1750	Precision Agriculture	3
ENG 1111	English I	3
<b>Spring</b>		
AGR 1150	Plant Science	4
AGR 2006	Co-op Experience n Natural Resources Part I	1
AGR 2800	Equipment Management, Maintenance & Repair	4
ENG 1112	English II	or
ENG 2211	Business Communication	3
MTH 1200	Technical Math for Agriculture	3
- -	Arts & Humanities Elective*	3
<b>Summer</b>		
AGR 2007	Co-op Experience n Natural Resources Part II	1
<b>Fall</b>		
AGR 1201	Pesticide Safety and Application	1
AGR 1400	Turfgrass Science	3
AGR 2601	Weed Science	3
AGR 2700	Ag Business Management	4
- -	Social & Behavior Science Elective*	3
<b>Spring</b>		
AGR 2602	Plant Pathology	2.5
AGR 2603	Plant Insect Pests	2.5
AGR 2850	Agricultural Capstone Seminar	3
GLG 1130	Earth and Space Science	4
Total Credit Hours		63

\* At least one must be a global awareness (GA) course. Select from social/behavioral sciences or arts/humanities courses identified in the Catalog as General Education for technical programs.

A complete listing of humanities and social science electives is available in the College Catalog.

## Horticulture Industries - Nursery Operations Option

The Horticultural Industries program provides basic preparation for careers in the landscape and turfgrass industries. The campus grounds, including a greenhouse facility and a one-hole golf course, act as a working laboratory to give students practical training. Clark State students can specialize in nursery operations. Landscape plant materials, landscape installation, and plant propagation are areas emphasized leading to careers in the garden-center and nursery industries.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in the Nursery Operations option, a graduate will be able to:

- Identify plant nutrient deficiencies and describe corrective measures.
- Identify major plant pests, including weeds, insects and diseases and describe corrective measures.
- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Demonstrate effective employability skills.
- Identify common landscape plant materials.
- Demonstrate the proper care of established plants in the landscape.
- Write clearly and accurately in variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.

### Scholastic Preparation

High school chemistry, biology, geometry, algebra, and keyboarding skills are strongly recommended.

### Transfer Options

Students enrolled in Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
AGR 1750	Precision Agriculture	3
ENG 1111	English I	3
<b>Spring</b>		
AGR 1150	Plant Science	4
AGR 2004	Co-op Experience in Nursery Ops Part I	1
AGR 2150	Herbaceous Plant Materials	3
ENG 1112	English II	or
ENG 2211	Business Communication	3
MTH 1200	Technical Math for Agriculture	3
- -	Arts & Humanities Elective*	3
<b>Summer</b>		
AGR 2005	Co-op Experience in Nursery Ops Part II	1
<b>Fall</b>		
AGR 2100	Woody Plant Materials	4
AGR 2601	Weed Science	3
AGR 2700	Ag Business Management	4
ACC 1000	Accounting Concepts	3
- -	Social & Behavioral Science Elective*	3
<b>Spring</b>		
AGR 2300	Plant Propagation	4
AGR 2450	Irrigation Systems	3
AGR 2602	Plant Pathology	2.5
AGR 2603	Plant Insect Pests	2.5
AGR 2850	Agricultural Capstone Seminar	3
Total Credit Hours		64

\* At least one must be a global awareness (GA). Select from social/behavioral sciences or arts/humanities courses identified in the Catalog as General Education for technical programs.

A complete listing of humanities and social science electives is available in the College Catalog.



## Horticulture Industries - Turf and Landscape Operations Option

The Horticultural Industries program provides basic preparation for careers in the landscape and turfgrass industries. The campus grounds, including a greenhouse facility and a one-hole golf course, act as a working laboratory to give students practical training. Clark State students can specialize in turf and landscape operations. Turfgrass science and turf management as well as landscape maintenance are emphasized leading to careers in the lawn-care and landscape maintenance industries.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in the Turf and Landscape Operations option, a graduate will be able to:

- Identify plant nutrient deficiencies and describe corrective measures.
- Identify major plant pests, including weeds, insects and diseases and describe corrective measures.
- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Demonstrate effective employability skills.
- Identify common landscape plant materials.
- Demonstrate the proper care of established plants in the landscape.
- Demonstrate basic trouble shooting and maintenance skills for small gas engines.
- Write clearly and accurately in variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.

### Scholastic Preparation

High school chemistry, biology, geometry, algebra, and keyboarding skills are strongly recommended.

### Transfer Options

Students enrolled in Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
AGR 1400	Turfgrass Science	3
ENG 1111	English I	3
<b>Spring</b>		
AGR 1150	Plant Science	4
AGR 2010	Co-op Experience in Turf & Landscape Part I	1
AGR 2800	Equipment Management, Maintenance & Repair	4
ENG 1112	English II	or
ENG 2211	Business Communication	3
MTH 1200	Technical Math for Agriculture	3
- -	Arts/Humanities Elective*	3
<b>Summer</b>		
AGR 2011	Co-op Experience in Turf & Landscape Part II	1
<b>Fall</b>		
AGR 1201	Pesticide Safety and Application	1
AGR 1650	Landscape Maintenance and Construction	4
AGR 2100	Woody Plant Materials	4
AGR 2601	Weed Science	3
AGR 2700	Ag Business Management	4
<b>Spring</b>		
AGR 2450	Irrigation Systems	3
AGR 2602	Plant Pathology	2.5
AGR 2603	Plant Insect Pests	2.5
AGR 2850	Agricultural Capstone Seminar	3
- -	Social/Behaviorial Science Elective*	3
	<b>Total Credit Hours</b>	<b>63</b>

\*At least one must be a global awareness (GA) course. Select from social/behavioral sciences or arts/humanities courses identified in the Catalog as General Education for technical programs.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional terms of study. Students should consult their academic advisor for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Horticulture Industry

The Horticultural Industry program provides basic preparation for careers in the landscape and turfgrass industries. The campus grounds, including a greenhouse facility and a one-hole golf course, act as a working laboratory to give students practical training. Students can specialize in the following topics through course electives:

- Golf Course Operations - study the maintenance of the golf course amenities
- Landscape Design - study landscape plant materials, design, and computer-aided design
- Natural Resources - study tree and shrub identification, landscape maintenance, turf science, and communication skills
- Nursery Operations - study landscape plant materials, landscape installation, and plant propagation
- Turf and Landscape Operations - study turfgrass science and turf management as well as landscape maintenance

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in the Horticulture, a graduate will be able to:

- Identify plant nutrient deficiencies and describe corrective measures.
- Identify major plant pests, including weeds, insects and diseases and describe corrective measures.
- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Demonstrate effective employability skills.
- Identify common landscape plant materials.
- Demonstrate the proper care of established plants in the landscape.
- Write clearly and accurately in variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Speak clearly and accurately in a variety of contexts and formats.
- Demonstrate basic trouble shooting and maintenance skills for small gas engines.

## Course # Course Title Credit Hours

### Fall

AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
AGR 1750	Precision Agriculture	3
ENG 1111	English I	3

### Spring

AGR 1150	Plant Science	4
ENG 2211	Business Communication	or
ENG 2230	Technical Report Writing	3
MTH 1200	Technical Math for Agriculture	3
- -	Co-Op Experience in AG Part I***	1
- -	Arts & Humanities Elective*	3

### Summer

- -	Co-Op Experience in AG Part II****	1
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### Fall

AGR 1201	Pesticide Safety and Application	1
AGR 2601	Weed Science	3
AGR 2700	Ag Business Management	4
- -	AGR Technical Elective**	3
- -	AGR Technical Elective**	3

### Spring

AGR 2602	Plant Pathology	2.5
AGR 2603	Plant Insect Pests	2.5
AGR 2850	Agricultural Capstone Seminar	3
- -	AGR Technical Elective**	3
- -	AGR Technical Elective**	3
- -	Social & Behavioral Science Elective*	3
	Total Credit Hours	60

\*At least one must be a global awareness (GA) course. Select from Social/Behavioral Sciences or Arts/Humanities courses identified in the catalog as General Education for technical programs.

\*\*AGR elective may be any AGR course not required above. AGR 1175, 1400, 1650, 2125, 2300, 2450, and 2800 are recommended.

\*\*\*AGR Co-Op Experience Part I may be one of the following: AGR 2000, AGR 2002, AGR 2004, AGR 2006, AGR 2010, AGR 2012, AGR 2014, AGR 2080.

\*\*\*\*AGR Co-Op Experience Part II may be one of the following: AGR 2001, AGR 2003, AGR 2005, AGR 2007, AGR 2009, AGR 2011, AGR 2013, AGR 2015.

## Precision Agriculture

The Precision Agriculture program option emphasizes preparation for agriculture service-industry occupations. Courses are offered in soil science, soil fertility, plant pests, precision agriculture, remote sensing, applied GIS for Agriculture and data analysis. The curriculum is designed to prepare students for employment with companies using geospatial technologies, including geographic information systems (GIS) and global positioning systems (GPS) applied to agricultural production or management activities, such as pest scouting, site-specific pesticide application, yield mapping, or variable-rate irrigation.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Precision Agriculture, a graduate will be able to:

- Identify plant nutrient deficiencies and describe corrective measures.
- Identify major plant pests, including weeds, insects, and diseases and describe corrective measures.
- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Demonstrate effective employability skills.
- Analyze data from precision agriculture platforms and prepare recommendations.
- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena, and make predictions.

### Scholastic Preparation

High school chemistry, biology, geometry, algebra, and keyboarding skills are strongly recommended.

### Transfer Options

Students enrolled in Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information or talk to your academic advisor.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
AGR 1750	Precision Agriculture	3
GEO 1000	Introduction to Cartography with GIS	3
<b>Spring</b>		
AGR 1150	Plant Science	4
AGR 2080	Co-op Experience in Precision Agriculture Part I	1
ENG 1111	English I	3
GST 1300	Introduction to UAS	3
GST 1500	Remote Sensing	3
MTH 1200	Technical Math for Agriculture	3
<b>Summer</b>		
AGR 2009	Co-op Experience n Precision Agriculture Part II	1
<b>Fall</b>		
AGR 2200	Crop Production	3
AGR 2601	Weed Science	3
ENG 2211	Business Communication	or
ENG 2230	Technical Report Writing	3
- -	Art & Humanities Elective*	3
<b>Spring</b>		
AGR 2602	Plant Pathology	2.5
AGR 2603	Plant Insect Pests	2.5
AGR 2751	Advanced Precision Agriculture	4
AGR 2800	Equipment Management, Maintenance & Repair	4
AGR 2850	Agricultural Capstone Seminar	3
Total Credit Hours		60

\* At least one must be a global awareness (GA). Select from arts/humanities courses identified in the Catalog as General Education for technical programs.

A complete listing of humanities and social science electives is available in the College Catalog.

## Precision Agriculture - Technician Option

The Precision Agriculture Technician program option emphasizes preparation for agriculture service-industry occupations. Courses are offered in soil science, soil fertility, plant pests, precision agriculture and applied precision agriculture technical information. The curriculum is designed to prepare students for employment with companies using precision agriculture equipment.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Precision Agriculture, a graduate will be able to:

- Troubleshoot, evaluate equipment to determine faulty components.
- Demonstrate an understanding of the precision equipment required for a given production goal.
- Present recommendations for the addition or retrofitting of precision equipment and install new or replacement components.
- Identify plant nutrient deficiencies and describe corrective measures.
- Identify major plant pests, including weeds, insects, and diseases and describe corrective measures.
- Develop a written agricultural business plan.
- Demonstrate effective employability skills.
- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.

### Scholastic Preparation

High school chemistry, biology, geometry, algebra, and keyboarding skills are strongly recommended.

### Transfer Options

Students enrolled in Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information or talk to your academic advisor.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1300	Soil Science	4
AGR 1750	Precision Agriculture	3
ENG 1111	English I	3
<b>Spring</b>		
AGR 1150	Plant Science	4
AGR 2080	Co-op Experience in Precision Agriculture Part I	1
INT 1210	Pneumatics I	1
INT 1220	Pneumatics II	1
INT 1240	Hydraulics I	1
INT 1250	Hydraulics II	1
INT 1310	AC/DC Electrical Systems	2
ENG 1112	English II	or
ENG 2211	Business Communication	3
MTH 1200	Technical Math for Agriculture	3
<b>Summer</b>		
AGR 2009	Co-op Experience in Precision Agriculture Part II	1
<b>Fall</b>		
AGR 2200	Crop Production	3
INT 1230	Pneumatics Troubleshooting	1
INT 1260	Hydraulics Troubleshooting	1
INT 1320	Electrical Control Relay	1
INT 1350	Motor and Motor Controls	3
- -	Arts & Humanities Elective*	3
- -	Social & Behavioral Science Elective*	3
<b>Spring</b>		
AGR 2602	Plant Pathology	2.5
AGR 2603	Plant Insect Pests	2.5
AGR 2751	Advanced Precision Agriculture	4
AGR 2800	Equipment Management, Maintenance & Repair	4
AGR 2850	Agricultural Capstone Seminar	3
Total Credit Hours		63

\* At least one must be a global awareness (GA). Select from social/behavioral sciences or arts/humanities courses identified in the Catalog as General Education for technical programs.

A complete listing of humanities and social science electives is available in the College Catalog.



# AGRICULTURE AND FOOD SCIENCE CERTIFICATES

## Precision Agriculture Short-Term Technical Certificate

Agricultural sales and service companies are hiring people who have complete coursework in both agriculture and geospatial technologies to develop precision agriculture programs or to provide technical assistance to farmers. The Precision Agriculture Specialist certificate is designed to provide the technical background necessary to begin a successful career as a Precision Agriculture Specialist. Students enrolled in Precision Agriculture certificate usually have an associate's or bachelor's degree. However, coursework included in a certificate program may ultimately be applied for the associate degree in the related technology program.

### Learning Outcomes

- Students will develop the skills needed to use, manage, and manipulate GIS applications
- Hands-on experience using GIS software
- Knowledge of fundamental concepts and issues related to precision agriculture
- Skills necessary to conduct precision agricultural analysis

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1100	Ag Survey and Professional Development	4
AGR 1750	Precision Agriculture	3
GEO 1000	Introduction to Cartography with GIS	3
<b>Spring</b>		
GST 1300	Introduction to UAS	3
GST 1500	Remote Sensing	3
MTH 1200	Technical Math for Agriculture	3
<b>Fall</b>		
AGR 2751	Advanced Precision Agriculture	4
<b>Spring</b>		
MGT 2450	Data Analytics	3
	Total Credit Hours	26

## Weed and Plant Pest Management Short- Term Technical Certificate

This certificate provides the knowledge and skills necessary to control weeds and pests. The certificate aligns with the Ohio Department of Agriculture (ODA) Private Pesticide Applicator and Commercial Pesticide Applicator licenses. Students are awarded a license upon completion of the Pesticide and Safety and Application course.

### Learning Outcomes

- Identify major plant pests, including weeds, insects and diseases and describe corrective measures.

Course #	Course Title	Credit Hours
<b>Fall</b>		
AGR 1201	Pesticide Safety and Application	1
AGR 2601	Weed Science	3
<b>Spring</b>		
AGR 2602	Plant Pathology	2.5
AGR 2603	Plant Insect Pests	2.5
	Total Credit Hours	9

# ARTS AND HUMANITIES

## Associate of Applied Science in Entertainment Technology

Entertainment Technology prepares students for entry-level careers in various areas such as set construction, sound engineering, and lighting for theatre, film, video, and event productions. Majors work hands-on in stagecraft, lighting, electrics, audio, rigging, video, computer-aided design, and welding.

In this intensive two-year program, Entertainment Technology students experience real-world training through a paid internship with the Clark State Performing Arts Center serving as theatre technicians setting up multiple touring productions. As a part of their coursework, students become the point-of-contact for technical needs on the Theatre Arts Program's fall and spring productions. Culminating the learning experience, students will co-op with local entertainment industries during their final term of study.

Students enrolled in the Entertainment Technology Associate of Applied Science degree are preparing for employment upon graduation from the program. However, at some point, students may also be interested in completing a bachelor's degree. A number of colleges and universities have designed Bachelor's Degree completion programs for students completing applied degrees. See the Transfer section of the catalog for more information or talk to your academic advisor.

### Learning Outcomes

- Use industry safety standards for all tools and equipment
- Recognize purpose and use of technical equipment
- Show how to read and implement designs within the program content areas
- Apply creative thinking to organize, design, and solve issues working independently and with a team

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
THE 1111	Stagecraft I	3
THE 1130	Theatre Appreciation	3
THE 2235	Stage Management	3
- -	Theatre Technology Practicum*	1
<b>Spring</b>		
CAD 1101	Computer-Aided Design I	3
MTH 1060	Business Mathematics	or
MTH 1070	Quantitative Reasoning	3
THE 1112	Stagecraft II	3
THE 2001	Entertainment Audio Technology	3
THE 1133	Script Analysis	3
- -	Theatre Technology Practicum*	1
<b>Fall</b>		
NWM 2000	Digital Multimedia I	3
SOC 1110	Introduction to Sociology	3
THE 2002	Entertainment Technology Troubleshooting	3
THE 2240	Basics of Theatre Design	3
THE 2000	Entertainment Lighting Technology	3
- -	Theatre Technology Practicum*	1
<b>Spring</b>		
NWM 2010	Digital Multimedia II	3
THE 2003	Entertainment Electricity and Rigging Technology	3
COM 1120	Public Speaking I	3
WLD 1000	Introduction to Welding Processes	3
THE 2282	Co-Op Education	3
- -	Theatre Technology Practicum*	1
Total Credit Hours		62

\* Choose from Technical Practicum courses THE 1121, 1122, 2123, 2124, and 2225.

# ARTS AND HUMANITIES CERTIFICATES

## Arts Administration Departmental Certificate

The Arts Administration departmental certificate is designed to prepare students for entry-level positions in arts administration. General education courses in theatre, as well as arts administration, acting, and stagecraft provide a broad overview of the arts. Accounting, marketing, and management courses will give the students the business background they need to succeed in arts management. Many of the courses needed for this certificate overlap those required in Management and/or Theatre Arts, so students can apply many of the following classes to the requirements for those programs.

Course #	Course Title	Credit Hours
<b>Fall</b>		
THE 1111	Stagecraft I	3
THE 2230	Theatre Management	or
THE 2235	Stage Management	3
THE 2241	Theatre History I	or
THE 2242	Theatre History II	3
ACC 1000	Accounting Concepts	3
MGT 1120	Principles of Management	3
<b>Spring</b>		
THE 1130	Theatre Appreciation	3
THE 2201	Acting I	3
ACC 1100	Introduction to Financial Accounting	4
MGT 1060	Organizational Behavior	3
MKT 2000	Marketing Management	3
	<b>Total Credit Hours</b>	<b>31</b>

## Communication Departmental Certificate

This certificate will provide the student with extensive background in and knowledge of effective communication skills necessary in today's work environment, including writing, oral, and listening skills. The ability to communicate effectively is listed among the top five qualifications that employers require and is often ranked as the number one required skill. In today's information-based world, excellent communication skills are vital to success, and this certificate will provide students the opportunity to gain invaluable knowledge of and practice using effective communication skills and/or to improve the communication skills they already possess. Students should follow the recommended sequencing of courses, with consideration to the pre/co-requisites, including college preparatory (CPE) requirements.

### Learning Outcomes

Upon completion of a Communication Departmental certificate, a graduate will be able to:

- Demonstrate effective interpersonal communication skills
- Describe relationships between mass media and other forms of media in society
- Produce well-constructed written communication utilizing the eight parts of speech
- Prepare and analyze quality business documents

Course #	Course Title	Credit Hours
<b>Fall</b>		
OAD 1105	Business English	4
ENG 1111	English I	3
COM 1110	Interpersonal Communication I	3
COM 1170	Small Group Communication	3
<b>Spring</b>		
COM 1120	Public Speaking I	3
COM 1130	Introduction to Mass Communication	3
ENG 1112	English II	3
ENG 2211	Business Communication	3
	<b>Total Credit Hours</b>	<b>25</b>

# Social Media Marketing Departmental Certificate

This certificate provides the knowledge and skills necessary to do entry level work in social media marketing and digital content creation.

## Learning Outcomes

Upon completion of the Social Media Marketing Departmental Certificate, a graduate will be able to:

- Utilize industry standard software effectively for digital content creation.
- Use social media effectively as a strategic marketing tool.

Course #	Course Title	Credit Hours
Fall		
NWM 1000	Introduction to New Media	2
NWM 1010	Social Media and Digital Interactivity	3
NWM 2000	Digital Multimedia I	3
GPH 1001	Introduction to Graphic Design	3
ITS 1500	HTML and CSS	3
ENG 1111	English I	3
Spring		
NWM 1005	Digital Aesthetics and User Experience	3
NWM 1020	Adobe for Web Professionals	3
NWM 1610	Web Design	3
NWM 2010	Digital Multimedia II	3
MKT 2000	Marketing Management	3
	Total Credit Hours	32



# BACHELOR'S DEGREES

## Addiction and Integrated Treatment Studies

The Bachelor of Applied Science Degree in Addiction and Integrated Treatment Studies prepares students to prevent substance abuse, counsel individuals and families with drug and alcohol problems, and perform intervention and therapeutic services for persons suffering from addiction and individuals with co-occurring issues of addiction and mental health disorders. This work occurs in outpatient and inpatient treatment settings, residential treatment programs, correctional settings, the courts, police departments, mental health settings, and family service agencies. Throughout the program, students develop advanced clinical skills to prepare them to perform the expected individual, group, and educational counseling to clients under supervision.

During the first two years of the program students take courses required to complete an Associate of Applied Science Degree in Addiction and Recovery Services and earn the Chemical Dependency Counseling Assistant (CDCA) certification from the Ohio Chemical Dependency Professionals Board, as well as coursework to qualify for the Licensed Chemical Dependency Counselor II (LCDC II). After completing the bachelor's degree, students are eligible for the LCDC III license.

### Practicum Coursework

Practicum courses begin summer of the first year and extend throughout the program. Within the first two years of the program, students complete 2000 hours to earn the CDCA certification from the Ohio Chemical Dependency Professionals Board.

Students will be billed for liability insurance for the practicum courses. The students may be requested by the practicum site to complete a criminal background check and a drug screen. Students should contact the practicum instructor with any questions regarding practicum.

### Learning Outcomes

- Apply and critique how the 8 Domains of Competency are utilized within a social service agency that provides treatment to clients with substance abuse disorders.
- Assess the needs of those with co-occurring disorders and provide proper treatment and referral for this population.
- Demonstrate skills in screening, assessing, and developing treatment plans for client populations in the field of substance use disorders and recovery.
- Complete professional documentation reports, including progress notes, psychosocial histories, and mental status evaluations, as well as other professional documentation.
- Identify and describe the physiological, psychological, and sociological effects of drugs on individuals, families, and societies.
- Utilize research on substance use disorders to identify evidence-based practices.

- Adhere to professional code of ethics and policy/procedural standard in working with clients and coworkers.
- Demonstrate self-awareness and competent use of cultural identity and advocacy models to address the needs of individuals and populations affected by substance abuse.

### Academic Requirements

Persons seeking a career in social services should recognize that to be successful, they must be emotionally stable, creative, and flexible. A social services professional must be able to work effectively with diverse groups of people and individuals with a wide variety of ages, racial and cultural backgrounds, and life situations. ENG 1111 must be completed with a grade of C or better before enrolling in additional courses. Students will be expected to meet minimum behavioral expectancies in order to continue in the Social Services program.

### Math Requirements

Students should speak with their faculty advisor regarding whether MTH 1070 Quantitative Reasoning or STT 2640 Elementary Statistics I, should be taken in order to meet the program's math requirement. If they are considering transferring to a university setting to complete their master's degree, the STT 2640 Elementary Statistics I course may be preferable.

### Graduation Requirements

In order to graduate, students must obtain a C or better in all SWK courses and demonstrate professional ethical behavior, effective oral and written communication, professional documentation skills, basic listening skills, and an awareness of personal biases as they affect clients.

### Transfer Options

Students completing the Bachelor of Applied Science in Addiction and Integrated Treatment Studies may wish to earn a master's degree. This program is transferable to various master's programs.

See your academic advisor for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
SWK 1105	Chemical Dependency I: Pharmacology and Physiology of Psychoactive Substances	3
ENG 1111	English I	3
FYE 1101	College Success	1
SWK 1110	Peer Support Fundamentals I	or
SWK 1112	Family Peer Support Fundamentals	4
<b>Spring</b>		
SWK 2205	Chemical Dependency II: Assessment, Diagnosis, and Treatment Strategies	3
SWK 1136	Affective Education and Group Treatment	3
PSY 1111	Introduction to Psychology	3
SWK 2260	Multicultural Competence in a Diverse World	3

**Summer**

PSY 2223	Lifespan Human Growth and Development	3
SOC 1110	Introduction to Sociology	3
- -	Arts/Humanities Elective*	3

**Fall**

SWK 2270	Addictions and Recovery Practicum I	2
SWK 2293	Addiction and Recovery Seminar I	1
SWK 2218	Social Work and Mental Health	3
ITS 1105	Computer Concepts and Software Applications	3
MTH 1070	Quantitative Reasoning	or
MTH 1280	College Algebra	or
STT 2640	Elementary Statistics I	3

**Spring**

SWK 2274	Addiction and Recovery Practicum II	5
SWK 2294	Addiction and Recovery Seminar II	1
SWK 2215	Chemical Dependency III: Co-Occurring Disorders of Addiction and Mental Health	3
SWK 2225	Chemical Dependency IV: Service Coordination	3

**Summer**

SWK 2275	Addiction and Recovery Practicum III	5
SWK 2295	Addiction and Recovery Seminar III	1

**Fall**

SWK 3305	Advanced Assessment, Screening, and Treatment Planning	4
SWK 3235	Trauma and Crisis Intervention	3
BIO 1410	Fundamentals of Biology	4
SOC 2230	Social Problems	3

**Spring**

SWK 3236	Advanced Techniques in Treatment Group Practices	3
SWK 3330	Special Populations I: Gender, Poverty, and Corrections	3
SWK 3210	Qualified Mental Health Professional (QMHP)	4
ENG 1112	English II	3

**Summer**

- -	Arts/Humanities/Social Sciences Elective	3
PSY 2230	Abnormal Psychology	3

**Fall**

SWK 4310	Treatment Techniques	4
SWK 4315	Co-Occurring Disorder Treatment: Mental Health	3
SWK 4320	Families and Co-Occurring Disorders	3

**Spring**

COM 1110	Interpersonal Communication I	or
COM 1120	Public Speaking I	3
SWK 4335	Special Populations II: Disabilities & Geriatrics	3
SWK 4350	Capstone	3
BIO 1420	Global Biology	4

**Summer**

SWK 4371	Addiction & Recovery Practicum V	3
SWK 4391	Addiction & Recovery Seminar V	1
	Total Credit Hours	122

\* Any 3-credit hour course with ART, ASL, ENG, FRN, HST, HUM, MUS, PHL, SPN, THE prefix,

## Bachelor of Science in Nursing (BSN) Completion Program

The BSN Completion Program at Clark State is designed for students who have earned a previous Associate Degree/Diploma Degree in Nursing and wish to further their career with a bachelor's degree. Completion of this program will position the graduate to expand their role as a registered nurse and assume leadership roles within healthcare organizations. This program will also provide a pathway for program graduates as they become eligible to pursue graduate degrees in nursing at institutions who offer advanced degrees.

This program is available at the Online location. The Clark State College BSN Completion Program integrates face-to-face and online student experiences, with a majority of didactic work to be complete online. Five courses integrate practicum experiences. Courses are either 8-week or 16-week depending upon the format and area of focus.

### Degree Availability

The Clark State College BSN Completion Program will integrates face-to-face and online student experiences, with a majority of didactic work to be complete online. Five courses integrate practicum experiences.

### Learning Outcomes

- The student will engage in professional nursing practice, providing holistic, individualized, compassionate care that is patient centered and culturally and developmentally appropriate across the lifespan.
- The student will incorporate a spirit of inquiry through the utilization of best evidence to make clinical judgements for quality improvement.
- The student will utilize effective communication with nursing and inter-professional teams, fostering open communication, respect and shared decision-making.
- The student will integrate informatics and technology to guide nursing judgement in making clinical decisions that minimize risk of harm to patients and providers.
- The student will continue to integrate the role of professional nurse, incorporating legal, ethical, and professional standards to the care of patients across the life span.

### Scholastic Preparation

Applicants can prepare for admission to this program by scheduling an appointment with a Clark State Academic advisor at [advisors@clarkstate.edu](mailto:advisors@clarkstate.edu) or by contacting Dr. Scott Dolan, Dean, Health, Human and Public Services, at 937-328-6060 or [dolans@clarkstate.edu](mailto:dolans@clarkstate.edu).

### Graduation Requirements

To be considered for admission to the BSN Completion Program, the applicant must hold an active unencumbered nursing license from the State of Ohio, or have an earned Associate/Diploma degree in Nursing and be eligible to sit for the NCLEX Licensure exam. These applicants will be granted one semester in which to obtain an active unencumbered nursing license.

Course #	Course Title	Credit Hours
<b>Fall</b>		
- -	Associate of Applied Science/Diploma Degree*	65
NUR 3000	Theoretical Foundations of Nursing Practice Theoretical Foundations of Nursing Practice	3
NUR 3003	Nursing Care of the Gerontological/Post-Acute Patient Nursing Care of the Gerontological/Post-Acute Care Population	4
NUR 3100	Nursing Leadership Nursing Leadership	4
NUR 3200	Nursing Informatics Nursing Informatics	3
PHL 2300	Medical Ethics Medical Ethics	3
- -	OT36 Social and Behavioral Sciences Elective**	3
<b>Spring</b>		
NUR 4000	Community Health Nursing Community Health Nursing	4
NUR 4001	Nutrition for Nursing Nutrition for Nursing	3
NUR 4002	Interprofessional Practice and Team-Based Care Interprofessional Practice and Team-Based Care	4
NUR 4102	Nursing Research and Evidence-Based Practice Nursing Research and Evidence Based Practice	3
- -	OT36 Natural Sciences Elective***	4
<b>Summer</b>		
NUR 4200	Transcultural Nursing Transcultural Nursing	3
NUR 4201	The Role of the Professional Nurse in Quality and Safety of Care The Role of the Professional Nursing and Quality and Safety of Care	3
NUR 4204	BSN Completion Capstone BSN Completion Capstone	6
- -	OT36 Arts/Humanities Elective	3
- -	General Education Elective^^	2
Total Credit Hours		120

\*65 credits from the Associate of Applied Science in Nursing apply to the 120 credit hours required for the Bachelor's degree. 39 credits awarded for associate's or diploma nursing courses and 26 credits awarded for general education from the completion of an associate's or diploma nursing program.

\*\*OT36 Social and Behavioral Sciences Elective from ECO 1100, 2210, 2220, GEO 1100, 2200, PLS 1100, 1300, 2300, 2400, SOC 1110, 2220, 2230, 2240, 2250, 2270, 2280.

\*\*\*OT36 Natural Sciences Elective from BIO 1410, 1420, 1510, 1520, CHM 1150, 1160, 1210, 1220, GLG 1131, 1132, 1133, PHY 1100, 1501, 1502, 2501, 2502.

^OT36 Arts/Humanities Elective from ART 1001, 1002, 1300, HST 1110, 1120, 1210, 1220, 1410, 1420, HUM 1110, MUS 1130, THE 1130, 1133, 2241, 2242.

^^General electives include most college level courses in the academic catalog. Consult an advisor for course selection.

## Manufacturing Technology Management - Computer-Aided Design Concentration

Students completing a Bachelor of Applied Science degree in Manufacturing Technology Management are qualified to pursue management, supervisor, and team leader roles in manufacturing, distribution, and engineering related facilities. Training in this program includes hands-on technical labs in robotics, welding, computer numerical control (CNC), industrial maintenance, manufacturing, additive, and computer-aided design. Management skills are embedded in each course to give students the opportunity to have “real life” experiences in the areas of human relations, communication, project management, and business.

### Learning Outcomes

Upon completion of a Bachelor of Applied Science degree in Manufacturing Technology Management, a graduate will be able to:

- Integrate principles of management with manufacturing processes, procedures, and production to develop problem solving and critical thinking skills in a manufacturing setting.
- Assess and apply operations management theory and best practices within the manufacturing environment to achieve operational goals.
- Demonstrate the management of integrated manufacturing processes within complex manufacturing environments
- Analyze and improve operations management decisions to meet desired outcomes within the manufacturing facility from design to production to sustainability.
- Generate training programs, evaluation methods and schedules to provide comprehensive training covering a broad range of technical skills used in manufacturing.
- Evaluate communication, leadership, and human relations skills between all levels of personnel within a manufacturing setting.

### Course # Course Title Credit Hours

#### Fall

CAD 2100	Solid Modeling	3
CAD 2200	Advanced Solid Modeling	3
CAD 2300	Computer-Aided Manufacturing	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1

#### Spring

CAD 1101	Computer-Aided Design I	3
CAD 1310	Residential Architecture and Design	3
CAD 2310	Introduction to Civil Engineering Technology	3
ENT 1000	Introduction to Industrial and Engineering Technology	3
MTH 1280	College Algebra	4

#### Summer

EBE 2701	Co-op Education I *	1
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#### Fall

ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENT 2700	Engineering Technology Project	3
ENG 1111	English I	3
STT 2640	Elementary Statistics I	3

#### Spring

ENT 2600	Engineering Design	3
ECO 1100	General Economics	3
ENG 2211	Business Communication	3
PHL 2100	Ethics	3
PHY 1100	Fundamentals of Physics	4

#### Fall

MTM 3000	Technical Manufacturing Skills for Management I	5
MTM 3100	Technical Manufacturing Skills for Management II	5
COM 1120	Public Speaking I	3
- -	Physical Science elective	4

#### Spring

MTM 3200	Integrative Manufacturing Technology	4
MTM 3300	Quality Management Systems in Manufacturing	4
MTM 3400	OSHA 30-Hour General Safety	3
MTH 3000	Math for Manufacturing Technology	4

#### Fall

MTM 4000	Real World Applications in Manufacturing	3
MTM 4100	Technical Communications	3
MGT 1500	Lean Six Sigma Yellow Belt / Problem Solving for Team Members	1
MGT 1510	Lean Six Sigma Green Belt / Problem Solving for Team Leaders	3
- -	**Arts/Humanities or Social/Behavioral Science (GA)	3

#### Spring

MTM 4300	Manufacturing Innovations	5
MTM 4400	Advanced Project Management for Manufacturing Processes	4
ECO 2220	Principles of Microeconomics	3
- -	**Arts/Humanities or Social/Behavioral Science (GA)	3
Total Credit Hours		123

\*\*Arts/Humanities or Social/Behavioral Science Electives recommended are PHL 2000 or SPN 1111 or ART 1300.



## Manufacturing Technology Management - Industrial Technology Concentration

Students completing a Bachelor of Applied Science degree in Manufacturing Technology Management are qualified to pursue management, supervisor, and team leader roles in manufacturing, distribution, and engineering related facilities. Training in this program includes hands-on technical labs in robotics, welding, computer numerical control (CNC), industrial maintenance, manufacturing, additive, and computer-aided design. Management skills are embedded in each course to give students the opportunity to have “real life” experiences in the areas of human relations, communication, project management, and business.

### Learning Outcomes

Upon completion of a Bachelor of Applied Science degree in Manufacturing Technology Management, a graduate will be able to:

- Integrate principles of management with manufacturing processes, procedures, and production to develop problem solving and critical thinking skills in a manufacturing setting.
- Assess and apply operations management theory and best practices within the manufacturing environment to achieve operational goals.
- Demonstrate the management of integrated manufacturing processes within complex manufacturing environments
- Analyze and improve operations management decisions to meet desired outcomes within the manufacturing facility from design to production to sustainability.
- Generate training programs, evaluation methods and schedules to provide comprehensive training covering a broad range of technical skills used in manufacturing.
- Evaluate communication, leadership, and human relations skills between all levels of personnel within a manufacturing setting.

Course #	Course Title	Credit Hours
<b>Fall</b>		
INT 1000	OSHA 10-Hour General Safety	1
INT 1210	Pneumatics I	1
INT 1220	Pneumatics II	1
INT 1230	Pneumatics Troubleshooting	1
INT 1310	AC/DC Electrical Systems	2
ENT 1000	Introduction to Industrial and Engineering Technology	3
EBE 1000	Employability Skills	1
ENT 1050	Manufacturing Foundations	4
<b>Spring</b>		
INT 1240	Hydraulics I	1
INT 1250	Hydraulics II	1
INT 1260	Hydraulics Troubleshooting	1
INT 1320	Electrical Control Relay	1
INT 1410	Mechanical Systems I	2
INT 1350	Motor and Motor Controls	3
ENG 1111	English I	3
MTH 1115	Industrial Calculations	3

### Summer

EBE 2702	Co-op Education I *	2
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### Fall

INT 1420	Mechanical Systems II	2
INT 1430	Mechanical Systems III	2
INT 2300	Electrical Troubleshooting	3
INT 2320	DC Electronic Drives	2
INT 2500	Programmable Logic Control	3
INT 2510	Process Control	3

### Spring

INT 2330	AC Electronic Drives	2
ECO 2210	Principles of Macroeconomics	3
ENG 2211	Business Communication	3
PHY 1100	Fundamentals of Physics	4
- -	**Arts/Humanities or Social/Behavioral Science Elective	3

### Fall

MTM 3000	Technical Manufacturing Skills for Management I	5
MTM 3100	Technical Manufacturing Skills for Management II	5
COM 1120	Public Speaking I	3
- -	**Physical Science Elective	4

### Spring

MTM 3200	Integrative Manufacturing Technology	4
MTM 3300	Quality Management Systems in Manufacturing	4
MTM 3400	OSHA 30-Hour General Safety	3
MTH 3000	Math for Manufacturing Technology	4

### Fall

MTM 4000	Real World Applications in Manufacturing	3
MTM 4100	Technical Communications	3
MGT 1500	Lean Six Sigma Yellow Belt / Problem Solving for Team Members	1
MGT 1510	Lean Six Sigma Green Belt / Problem Solving for Team Leaders	3
- -	**Arts/Humanities or Social/Behavior Science Elective	3

### Spring

MTM 4300	Manufacturing Innovations	5
MTM 4400	Advanced Project Management for Manufacturing Processes	4
ECO 2220	Principles of Microeconomics	3
- -	**Arts/Humanities or Social/Behavior Science Elective	3
Total Credit Hours		121

\*The co-op must be a minimum of 2 semester hours in an combination of co-op (EBE 2701, EBE 2702, EBE 2703, EBE 2704).

\*\*Art/Humanities or Social/Behavioral Science Electives recommended are PHL 2000 Critical Thinking or SPN 1111 Spanish I or ART 1300 Appreciation of the Arts.

## Manufacturing Technology Management - Manufacturing Engineering Technology Concentration

Students completing a Bachelor of Applied Science degree in Manufacturing Technology Management are qualified to pursue management, supervisor, and team leader roles in manufacturing, distribution, and engineering related facilities. Training in this program includes hands-on technical labs in robotics, welding, computer numerical control (CNC), industrial maintenance, manufacturing, additive, and computer-aided design. Management skills are embedded in each course to give students the opportunity to have “real life” experiences in the areas of human relations, communication, project management, and business.

### Learning Outcomes

Upon completion of a Bachelor of Applied Science degree in Manufacturing Technology Management, a graduate will be able to:

- Integrate principles of management with manufacturing processes, procedures, and production to develop problem solving and critical thinking skills in a manufacturing setting.
- Assess and apply operations management theory and best practices within the manufacturing environment to achieve operational goals.
- Demonstrate the management of integrated manufacturing processes within complex manufacturing environments.
- Analyze and improve operations management decisions to meet desired outcomes within the manufacturing facility from design to production to sustainability.
- Generate training programs, evaluation methods and schedules to provide comprehensive training covering a broad range of technical skills used in manufacturing.
- Evaluate communication, leadership, and human relations skills between all levels of personnel within a manufacturing setting.

### Course # Course Title Credit Hours

#### Fall

ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
--	First Certificate Class #1	3
--	First Certificate Class #2	3
--	First Certificate Class #3	3

#### Spring

ENT 1000	Introduction to Industrial and Engineering Technology	3
MTH 1280	College Algebra	4
--	Second Certificate Class #1	3
--	Second Certificate Class #2	3
--	Second Certificate Class #3	3

#### Summer

EBE 2702	Co-op Education I	2
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#### Fall

ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENT 2700	Engineering Technology Project	3
ENG 1111	English I	3
STT 2640	Elementary Statistics I	3

#### Spring

ENT 2600	Engineering Design	3
ECO 1100	General Economics	3
ENG 2211	Business Communication	3
PHL 2100	Ethics	3
PHY 1100	Fundamentals of Physics	4

#### Fall

MTM 3000	Technical Manufacturing Skills for Management I	5
MTM 3100	Technical Manufacturing Skills for Management II	5
COM 1120	Public Speaking I	3
--	Physical Science Elective	4

#### Spring

MTM 3200	Integrative Manufacturing Technology	4
MTM 3300	Quality Management Systems in Manufacturing	4
MTM 3400	OSHA 30-Hour General Safety	3
MTH 3000	Math for Manufacturing Technology	4

#### Fall

MTM 4000	Real World Applications in Manufacturing	3
MTM 4100	Technical Communications	3
MGT 1500	Lean Six Sigma Yellow Belt / Problem Solving for Team Members	1
MGT 1510	Lean Six Sigma Green Belt / Problem Solving for Team Leaders	3
--	Arts/Humanities or Social/Behavioral Science (GA)	3

#### Spring

MTM 4300	Manufacturing Innovations	5
MTM 4400	Advanced Project Management for Manufacturing Processes	4
ECO 2220	Principles of Microeconomics	3
--	Arts/Humanities or Social/Behavioral Science (GA)	3
	<b>Total Credit Hours</b>	<b>124</b>

## Manufacturing Technology Management - Mechanical Engineering Technology Concentration

Students completing a Bachelor of Applied Science degree in Manufacturing Technology Management are qualified to pursue management, supervisor, and team leader roles in manufacturing, distribution, and engineering related facilities. Training in this program includes hands-on technical labs in robotics, welding, computer numerical control (CNC), industrial maintenance, manufacturing, additive, and computer-aided design. Management skills are embedded in each course to give students the opportunity to have “real life” experiences in the areas of human relations, communication, project management, and business.

### Learning Outcomes

Upon completion of a Bachelor of Applied Science degree in Manufacturing Technology Management, a graduate will be able to:

- Integrate principles of management with manufacturing processes, procedures, and production to develop problem solving and critical thinking skills in a manufacturing setting.
- Assess and apply operations management theory and best practices within the manufacturing environment to achieve operational goals.
- Demonstrate the management of integrated manufacturing processes within complex manufacturing environments
- Analyze and improve operations management decisions to meet desired outcomes within the manufacturing facility from design to production to sustainability.
- Generate training programs, evaluation methods and schedules to provide comprehensive training covering a broad range of technical skills used in manufacturing.
- Evaluate communication, leadership, and human relations skills between all levels of personnel within a manufacturing setting.

Course #	Course Title	Credit Hours
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#### Fall

ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
ENG 1111	English I	3
INT 1000	OSHA 10-Hour General Safety	1
MTH 1280	College Algebra	or
MTH 2200	Calculus I	4

#### Spring

ENT 1500	Engineering Materials	3
INT 1320	Electrical Control Relay	1
INT 2500	Programmable Logic Control	3
ENG 1112	English II	3
MTH 1340	Pre-Calculus	or
MTH 2220	Calculus II	5

#### Summer

EBE 2702	Co-op Education I	2
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#### Fall

ENT 2100	Manufacturing Processes	3
CAD 2100	Solid Modeling	3
PHY 1501	General Physics I with Algebra	or
PHY 2501	College Physics I with Calculus	5
- -	Arts/Humanities or Social Behavior Science (GA)	3

#### Spring

ENT 2200	Statics	3
ENT 2300	Strength of Materials	3
ENT 2600	Engineering Design	3
PHY 1502	General Physics II with Algebra	or
PHY 2502	College Physics II with Calculus	5

#### Fall

MTM 3000	Technical Manufacturing Skills for Management I	5
MTM 3100	Technical Manufacturing Skills for Management II	5
COM 1120	Public Speaking I	3
- -	Physical Science	4

#### Spring

MTM 3200	Integrative Manufacturing Technology	4
MTM 3300	Quality Management Systems in Manufacturing	4
MTM 3400	OSHA 30-Hour General Safety	3
MTH 3000	Math for Manufacturing Technology	4

#### Fall

MTM 4000	Real World Applications in Manufacturing	3
MTM 4100	Technical Communications	3
MGT 1500	Lean Six Sigma Yellow Belt / Problem Solving for Team Members	1
MGT 1510	Lean Six Sigma Green Belt / Problem Solving for Team Leaders	3
- -	Arts/Humanities or Social/Behavioral Science	3

#### Spring

MTM 4300	Manufacturing Innovations	5
MTM 4400	Advanced Project Management for Manufacturing Processes	4
ECO 2220	Principles of Microeconomics	3
- -	Arts/Humanities or Social/Behavioral Science	3
Total Credit Hours		121

## Web Design and Development - Web Design Concentration

The Bachelor of Applied Science Degree in Web Design and Development is a combination of front-end (web design) and back-end (web development) curriculum with an emphasis on experiential learning. There is a growing demand for web developers with front-end development skills who can build responsive, accessible websites based on client or team specifications. They use the elements and principles of design, analytics, and usability to inform their design choices. Web designers with back-end development skills are adaptable problem solvers who can address programming challenges.

The Bachelor of Applied Science Degree in Web Design and Development will prepare students for employment as web designers, front-end developers, interaction designers, UI/UX designers, SEO engineers, digital marketing analysts, site reliability engineers, and more.

### Learning Outcomes

- Adapt to various problem-solving needs using the appropriate tools in web design and development while utilizing persistence, curiosity, research, and a willingness to learn.
- Communicate effectively, able to make formal and informal presentations to clients, managers, technical, and non-technical staff.
- Deploy full-stack web applications with integrated server-side databases in a testing environment, on a web server, or in the cloud while using an Agile Development model and working in teams and individually.
- Design responsive, front-end user interfaces based on client need, design elements and principles, analytics, usability testing, and best practice coding that adheres to web standards and semantics.
- Work with various computer platforms, including Windows, Mac OS, and Linux.
- Write computer programs to support web applications such as client-side scripts, server-side scripts with attention to version control, web security, and client specifications.

### Scholastic Preparation

Web Design and Development students need a high school algebra background equivalent to MTH 0650 Algebra for Non-STEM majors. Students with little or no computer background should enroll in ITS 0700 Computer Fundamentals as a preparatory course before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 Beginning Keyboarding.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NWM 1000	Introduction to New Media	2
GPH 1001	Introduction to Graphic Design	3
CSD 1510	Programming Fundamentals with Python ^*	3
ITS 1500	HTML and CSS ^*	3
ENG 1111	English I	3
FYE 1101	College Success	1
<b>Spring</b>		
CSD 1600	JavaScript and jQuery	3
NWM 1005	Digital Aesthetics and User Experience	3
NWM 1020	Adobe for Web Professionals	3
NWM 1610	Web Design	3
ITS 1105	Computer Concepts and Software Applications ^*	3
<b>Fall</b>		
CSD 1300	Database Management	2
CSD 1310	SQL I	2
CSD 2521	Java Programming I	3
NWM 1010	Social Media and Digital Interactivity	3
NWM 2400	Advanced Web Design	3
NWM 2000	Digital Multimedia I	3
<b>Spring</b>		
COM 1120	Public Speaking I	3
STT 2640	Elementary Statistics I	3
ART 1002	Art History II **AH	3
PSY 1111	Introduction to Psychology ***SB	3
CSD 2800	Advanced Topics	3
<b>Fall</b>		
WDD 3100	User Interface Design	3
WDD 3200	HTML and CSS II	3
WDD 3400	JavaScript for Web Development	3
GEO 1100	Human Geography **SB	3
PHL 2000	Critical Thinking **AH	3
<b>Spring</b>		
WDD 3300	Web Analytics and SEO	3
WDD 3500	Python for Web Development	3
WDD 3600	Server-side Programming and Database	3
MTH 1070	Quantitative Reasoning	3
<b>Summer</b>		
WDD 3700	Web Design and Development Internship	3
ENG 1112	English II	3
<b>Fall</b>		
WDD 4300	User Experience Design	3
WDD 4600	Web Server Interaction	3
WDD 4700	Senior Project I	3
BIO 1410	Fundamentals of Biology **NS	4
<b>Spring</b>		
WDD 4710	Senior Project II	3
WDD 4800	Web Design and Development Capstone	3
GLG 1131	Physical Geology **NS	4
ECO 2220	Principles of Microeconomics **SB	3
Total Credit Hours		120

^Proficiency test available.



\*Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\* Elective options - Where indicated, a specific course has been suggested. Students may complete the listed course OR choose a course from the options specified below to fulfill this requirement.

\*\*NS - Natural Science Electives: GLG 1131, GLG 1132, BIO 1410, BIO 1420, PHY 1100

\*\*AH - Arts/Humanities Electives: ART 1001, ART 1002, HST 1110, HST 1120, HST 1210, HST 1220, PHL 2000, PHL 2100

\*\*SB - Social/Behavioral Science Electives: ECO 2210, ECO 2220, GEO 1100, GEO 1400, GEO 2200, PLS 1100, PLS 1300, PLS 2300, SOC 1110, PSY 1111

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional terms of study. Students should consult their academic advisors for help in planning their schedules.

## Web Design and Development - Web Development Concentration

The Bachelor of Applied Science Degree in Web Design and Development is a combination of front-end (web design) and back-end (web development) curriculum with an emphasis on experiential learning. There is a growing demand for developers possessing both web design and web development skills. As technology rapidly expands and evolves, many companies are seeking talented developers who can understand and work on both the front and back-end to create a usable product with little input or support. These developers can develop fully fledged platforms (with databases, servers, and clients) which don't need other applications to function.

Web Developers with front-end development skills can design responsive, user interfaces based on client or team specifications. They use the elements and principles of design, analytics, and usability to inform their design choices. Web Developers with back-end development skills can create advanced websites using client-side programming, server-side programming, and databases with an attention to security and version control. Web Developers with back-end development skills are adaptable problem solvers who can address web application programming challenges.

The Bachelor of Applied Science Degree in Web Design and Development will prepare students for employment as web developers, software architects, software engineers, software developers, system administrators, systems analysts, DevOps engineers, database administrators, cloud architects, full-stack developers, and more.

### Learning Outcomes

- Adapt to various problem-solving needs using the appropriate tools in web design and development while utilizing persistence, curiosity, research, and a willingness to learn.
- Work with various computer platforms, including Windows, Mac OS, and Linux.
- Write computer programs to support web applications such as client-side scripts, server-side scripts with attention to version control, web security, and client specifications.
- Deploy full-stack web applications with integrated server-side databases in a testing environment, on a web server, or in the cloud while using an Agile Development model and working in teams and individually.
- Communicate effectively, able to make formal and informal presentations to clients, managers, technical, and non-technical staff.
- Design responsive, front-end user interfaces based on client need, design elements and principles, analytics, usability testing, and best practice coding that adheres to web standards and semantics.

### Scholastic Preparation

Web Design and Development students need a high school algebra background equivalent to MTH 0650 Algebra for Non-STEM majors. Students with little or no computer background should enroll in ITS 0700 Computer Fundamentals as a preparatory course before taking

other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 Keyboarding.

Course #	Course Title	Credit Hours
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**Fall**

CSD 1510	Programming Fundamentals with Python ^*	3
ENG 1111	English I	3
FYE 1101	College Success	1
ITS 1105	Computer Concepts and Software Applications ^*	3
ITS 1205	Windows Concepts ^*	1
ITS 1300	Introduction to Computers and Networks	2
ITS 1500	HTML and CSS ^	3

**Spring**

CSD 1300	Database Management	2
CSD 1310	SQL I	2
CSD 1600	JavaScript and jQuery	3
NWM 1005	Digital Aesthetics and User Experience	3
NWM 1020	Adobe for Web Professionals	3
NWM 1610	Web Design	3

**Fall**

CSD 2100	Systems Analysis and Design	3
CSD 2310	SQL II	2
CSD 2521	Java Programming I	3
NWM 2400	Advanced Web Design	3
PSY 1111	Introduction to Psychology **SB	3

**Spring**

CSE 1110	Introduction to Cybersecurity	3
COM 1120	Public Speaking I	3
STT 2640	Elementary Statistics I	3
CSD 2800	Advanced Topics	3
ART 1002	Art History II **AH	3

**Fall**

WDD 3100	User Interface Design	3
WDD 3200	HTML and CSS II	3
WDD 3400	JavaScript for Web Development	3
GEO 1100	Human Geography **SB	3
PHL 2000	Critical Thinking **AH	3

**Spring**

WDD 3300	Web Analytics and SEO	3
WDD 3500	Python for Web Development	3
WDD 3600	Server-side Programming and Database	3
MTH 1070	Quantitative Reasoning	3

**Summer**

WDD 3700	Web Design and Development Internship	3
ENG 1112	English II	3

**Fall**

WDD 4300	User Experience Design	3
WDD 4600	Web Server Interaction	3
WDD 4700	Senior Project I	3
BIO 1410	Fundamentals of Biology **NS	4

**Spring**

WDD 4710	Senior Project II	3
WDD 4800	Web Design and Development Capstone	3
GLG 1131	Physical Geology **NS	4
ECO 2220	Principles of Microeconomics **SB	3
Total Credit Hours		120

^Proficiency test available.

\*Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\* Elective options - Where indicated, a specific course has been suggested. Students may complete the listed course OR choose a course from the options specified below to fulfill this requirement.

\*\*NS - Natural Science Electives: GLG 1131, GLG 1132, BIO 1410, BIO 1420

\*\*AH - Arts/Humanities Electives: ART 1001, ART 1002, HST 1110, HST 1120, HST 1210, HST 1220, PHL 2000, PHL 2100

\*\*SB - Social/Behavioral Science Electives: ECO 2210, ECO 2220, GEO 1100, GEO 1400, GEO 2200, PLS 1100, PLS 1300, PLS 2300, SOC 1110, PSY 1111

\*\*Technical electives must total 3 semester hours. They may come from any combination of courses (including online courses) not already prescribed that use the following course codes: CSD, CSE, GST, NWM, NTK, or GEO 1000

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional terms of study. Students should consult their academic advisors for help in planning their schedules.

# BUSINESS

## Accounting

Accountants must have an appreciation of all aspects of business organizations as well as technical proficiency in maintaining accurate records, preparing and analyzing financial statements and other types of financial reports. Accountants may work in such areas as general accounting, bookkeeping, auditing, tax preparation, cost accounting, budgeting, or financial investigation.

The demand for trained accountants has increased substantially with the growth and complexity of business and government. According to the U.S. Bureau of Labor Statistics, accountants and auditors can expect faster than average employment growth over the 2022-2032 decade.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

This program is available both in class and online. Students should consult with their advisor for the recommended sequencing of evening courses.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Accounting, a graduate will be able to:

- Demonstrate an understanding of the federal tax laws and their application to both individuals and business entities.
- Demonstrate the ability to utilize and apply technology as it impacts the accounting profession.
- Apply mathematical concepts and technology to interpret, understand, and communicate quantitative data.
- Demonstrate an understanding of the basic concepts of managerial and cost accounting and their roles in business and decision making.
- Interpret, analyze, and present reliable and relevant information to financial statement users based upon generally accepted accounting principles both manually and electronically.

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
ACC 1100	Introduction to Financial Accounting ^	4
ENG 1111	English I	3
FYE 1101	College Success	1
ITS 1235	Beginning Spreadsheet ^ *	1
ITS 1245	Beginning Database ^ *	1
MGT 1105	Introduction to Business	2
MTH 1060	Business Mathematics	3
<b>Spring</b>		
ACC 1200	Managerial Accounting	4
ACC 1300	Payroll Accounting	2
ACC 1400	Computerized Accounting	3
COM 1110	Interpersonal Communication I	or
COM 1170	Small Group Communication	3
ECO 2210	Principles of Macroeconomics	3
<b>Fall</b>		
ACC 2000	Spreadsheet Accounting	3
ACC 2100	Intermediate Accounting I	4
ACC 2400	Tax Accounting	4
ENG 2211	Business Communication	3
MGT 2600	Legal Environment of Business	3
<b>Spring</b>		
ACC 2200	Intermediate Accounting II	4
ACC 2300	Cost Accounting	3
ART 1300	Appreciation of the Arts **	or
SPN 1100	Survival Spanish **	3
ECO 2220	Principles of Microeconomics	3
MGT 2270	Business Finance or Co-op Electives	3
Total Credit Hours		63

^Proficiency test available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\* Or advisor approval on alternate Arts/Humanities Global Awareness (GA) elective.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Associate of Science General Transfer - Business Pathway

The Business Pathway of the Associate of Science degree emphasizes transfer preparation for students to pursue a bachelor's degree in business. An Associate of Science degree provides the foundational knowledge and skills in general education that are often required to pursue a Bachelor's degree. Courses in this pathway focus on accounting, marketing, and management. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Science program, particularly at state institutions in Ohio. It is not designed to prepare students for the skills needed to obtain employment in the field of business upon completion of the associate degree. Students who wish to obtain more immediate employment in the business field should consider the Associate of Applied Business degree in Management that is offered at Clark State.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Science degree in Business a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available at <https://www.ohiohighered.org/OGTP>.

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
ACC 1100	Introduction to Financial Accounting	4
STT 2640	Elementary Statistics I	3
- -	OT 36 Arts and Humanities Elective *	3
<b>Spring</b>		
ENG 1112	English II	or 3
COM 1120	Public Speaking I	3
ACC 1200	Managerial Accounting	4
MGT 1120	Principles of Management	3
ECO 2220	Principles of Microeconomics	3
- -	Elective **	3
<b>Fall</b>		
ECO 2210	Principles of Macroeconomics	3
ENG 2211	Business Communication	3
MKT 2000	Marketing Management	3
- -	OT 36 Arts and Humanities Elective (GA) *	3
- -	OT 36 Natural Sciences Elective ***	4
<b>Spring</b>		
MTH 2100	Calculus for the Management, Life and Social Sciences	or 5
MTH 2200	Calculus I	5
MGT 2600	Legal Environment of Business	3
- -	OT 36 Social and Behavioral Sciences Elective (GA) (outside ECO) ^	3
- -	OT 36 Natural Sciences Elective ***	4
Total Credit Hours		61

\*Ohio Transfer 36 Arts and Humanities Electives from two different areas: ART 1001, 1002, 1300, ENG 1600, 2300, HST, MUS 1130, PHL 2100, 2300, 2400, THE 1130, 2241, 2242

\*\*General electives include most college level courses in the academic catalog. Consult an advisor to select an appropriate course based on the transfer institution.

\*\*\*Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

^Ohio Transfer 36 Social and Behavioral Sciences Elective outside ECO: GEO 1100, 2200, PLS 1300, 2300, PSY 1111, 2223, 2230, SOC

GA: This degree requires at least two courses with significant international content designated as Global Awareness courses.

## Business Transfer - Central State University

The Business Transfer program is a calculus-based curriculum that will prepare a student to transfer into the College of Business at Central State University. This selection of courses is designed to allow a student to enter the College of Business with junior status upon completion, provided the student has maintained the requisite GPA.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an associate degree in Pre-Business, a graduate will be able to meet the goals outlined for the general associate of science degree; additionally, the student will be able to:

- Demonstrate awareness of the role of the business person in society.
- Demonstrate awareness of the rapidly changing global business environment.

### Scholastic Preparation

Students entering this program should have taken mathematics courses each year of high school. Students who do not test into MTH 1280 College Algebra will need to take the necessary prerequisite mathematics courses before beginning the mathematics sequence.

Course #	Course Title	Credit Hours
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#### Fall

FYE 1101	College Success	1
ENG 1111	English I	3
PSY 1111	Introduction to Psychology	3
CHM 1150	Introduction to General Chemistry	4
- -	Elective*	3

#### Spring

ENG 1112	English II	3
HST 1110	Western Civilization to 1600	or
HST 1120	Western Civilization Since 1600	3
MTH 1280	College Algebra	4
- -	Elective*	3
- -	Elective*	3

#### Fall

ENG 2300	Great Books: World Literature	3
ECO 2210	Principles of Macroeconomics	or
ECO 2220	Principles of Microeconomics	3
MTH 2100	Calculus for the Management, Life and Social Sciences	5
PHY 1501	General Physics I with Algebra	5
- -	Elective*	2

### Spring

COM 1120	Public Speaking I	3
HST 1410	African American History to 1877	or
HST 1420	African American History Since 1877	3
SOC 1110	Introduction to Sociology	3
- -	Elective*	3
- -	Elective*	3
	Total Credit Hours	63

\*Take a total of at least 17 concentration/elective credits within the degree from the following courses: ACC 1100, ACC 1200, ITS 1105, MGT 1105, MGT 1120, MGT 2600, MKT 2000, STT 2640, ECO 2210 (if not already taken), ECO 2220 (if not already taken). These concentration/elective classes should be planned carefully with an advisor from Central State, and may vary by the specific concentration chosen.

In recognition of the growing importance of global awareness, the Associate of Science degree requires students to take at least four courses with significant international content. Courses meeting this requirement are identified in the College catalog and are fulfilled as a part of the requirements within the concentration or elective areas.

All students pursuing the Associate of Science degree are required to complete at least 9 credit hours in courses numbered 2000 or higher. These classes are taken as a part of the requirements within the concentration or elective areas.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Some individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisor for help in planning their schedules.



## Business Transfer - Wright State University

The Business Transfer program is a calculus-based curriculum that will prepare a student to transfer into the Raj Soin College of Business at Wright State University. This selection of courses is designed to allow a student to enter the College of Business with junior status upon completion, provided the student has maintained a GPA of 2.5 or higher.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate degree in Pre-Business, a graduate will be able to meet the goals outlined for the general Associate of Science degree; additionally, the student will be able to :

- Demonstrate awareness of the role of the business person in society.
- Demonstrate awareness of the rapidly changing global business environment.

### Scholastic Preparation

Students entering this program should have taken mathematics courses each year of high school. Students who do not test into MTH 1280 College Algebra will need to take the necessary prerequisite mathematics courses before beginning the mathematics sequence.

### Course # Course Title Credit Hours

#### Fall

ENG 1111	English I	3
ACC 1100	Introduction to Financial Accounting	4
HST 1110	Western Civilization to 1600 (GA)	3
STT 2640	Elementary Statistics I	3
FYE 1101	College Success	1

#### Spring

ENG 1112	English II	3
ACC 1200	Managerial Accounting	4
STT 2650	Elementary Statistics II	2
HST 1120	Western Civilization Since 1600 (GA)	3

#### Summer

ENG 2211	Business Communication (GA)	3
PSY 1111	Introduction to Psychology (GA)	or
SOC 1110	Introduction to Sociology (GA)	3
COM 1120	Public Speaking I	3

#### Fall

ECO 2210	Principles of Macroeconomics	3
MGT 1120	Principles of Management	3
MKT 2000	Marketing Management	3
- -	Science*	4
ENG 2300	Great Books: World Literature (GA)	3

### Spring

MTH 2100	Calculus for the Management, Life and Social Sciences	5
- -	Science*	4
ECO 2220	Principles of Microeconomics	3
MGT 2600	Legal Environment of Business	3
	Total Credit Hours	66

\*Science classes chosen must be taken from those listed under the Natural & Physical Sciences in the Ohio Transfer 36. Choose at least two classes from BIO, CHM, GLG, PHY most suited to your transfer institution.

In recognition of the growing importance of global awareness, the Associate of Science degree requires students to take at least four courses with significant international content. Courses meeting this requirement are identified in the College catalog and are fulfilled as a part of the requirements within the concentration or elective areas.

All students pursuing the Associate of Science degree are required to complete at least 9 credit hours in courses numbered 2000 or higher. These classes are taken as a part of the requirements within the concentration or elective areas.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory education recommendations. Some individuals, especially part-time students and those taking college preparatory education courses, will require additional semesters of study. Students should consult their academic advisor for help in planning their schedules.

## Graphic Design

Graphic designers develop a variety of visual communication solutions for clients including advertisements, product packaging, brochures, brand identities, editorial and digital graphics, motion graphics, book covers, and posters. The average salary of graphic designers in Ohio is \$50,210 (from CareerOneStop). The goal is integration of the conceptual and technical with a dedication to craftsmanship. Students will develop critical and conceptual thinking skills so that they can communicate any idea clearly and powerfully. Students will be prepared for the practice of design as a profession and provided the basis for their continued creative, personal and professional growth.

With a problem-solving, project-based format, students will develop essential graphic design and illustration skills, create a portfolio, explore the integration of type and images, and creatively deliver messages responsive to the needs of the client and their target audience. 100% of our graphic design students work with real clients before graduation.

The Graphic Design program is a two-year computer intensive learning experience focusing on industry-standard practices. Dedicated to keeping up with technological advances affecting the visual arts, the program integrates technology with fine arts sensibility. Students with little experience with computers should take special note of the "Academic Preparation" section. The program course schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisor for help in planning their schedules. Graduating graphic design students wishing to further build their digital multimedia and web design skills could also receive an Associate of Applied Business in New Media by completing an additional 10 courses in the New Media curriculum. Students wishing to obtain a bachelor's degree in graphic design can take MTH 1070 Quantitative Reasoning and ART 1121 Drawing II and transfer to the Wright State University Lake Campus to complete the two additional years needed for a Bachelor of Technical and Applied Studies with a Graphic Design Concentration.

### Learning Outcomes

Upon completion of an Associate of Applied Business in Graphic Design, a graduate will be able to:

- Utilize industry standard software effectively for design.
- Professionally communicate ideas, concepts and design knowledge.
- Manage a design problem from conceptualization to a finished project.
- Design and present a professional portfolio.

### Scholastic Preparation

Graphic Design students with little or no computer background should enroll in ITS 0700, Computer Fundamentals, as a preparatory course before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710, Beginning Keyboarding.

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. Some colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
GPH 1001	Introduction to Graphic Design	3
ART 1111	Drawing I	3
ENG 1111	English I	3
FYE 1101	College Success	1
MTH 1060	Business Mathematics *	or 3
MTH 1070	Quantitative Reasoning *	3
PSY 1111	Introduction to Psychology	3
<b>Spring</b>		
GPH 1110	Digital Illustration I	3
GPH 1112	Typography	3
GPH 1201	Electronic Imagery I	3
ART 1121	Drawing II *	or 3
NWM 2010	Digital Multimedia II *	3
COM 1120	Public Speaking I	3
<b>Fall</b>		
GPH 2011	Computer Layout I	3
GPH 2111	Digital Illustration II	3
GPH 2120	Logo, Symbol, Corporate I.D.	3
GPH 2202	Electronic Imagery II	3
ENG 1112	English II	3
ITS 1500	HTML and CSS	3
<b>Spring</b>		
GPH 2012	Computer Layout II	3
GPH 2051	Professional Development	3
GPH 2085	Service Learning Capstone	3
ART 1002	Art History II	3
NWM 1610	Web Design	3
Total Credit Hours		64

\*Students wishing to transfer to complete the Bachelor of Technical and Applied Studies with a Graphic Design Concentration will need to take MTH 1070 Quantitative Reasoning and ART 1121 Drawing II.

Note: It is extremely important that students save all artwork from the first term forward to enable them to build a portfolio in GPH 2051.

## Judicial Court Reporting

This online program is a “Shared Program” between Clark State and Stark State College, offering a unique opportunity for providing excellence in teaching and learning. The vital, exciting, and rewarding IT profession of judicial court reporting provides opportunities in multiple realtime career paths. Judicial court reporters are the guardians of the record, providing a verbatim record of the proceedings of a courtroom, deposition, hearing, arbitration, or meeting and producing an accurate transcript of the proceedings, using state-of-the-art technology. This technology allows court reporters to provide instantaneous translation referred to as realtime for all parties involved in the proceedings, whether present on site or at a distance via the Internet. The ability to create word-for-word accounts and provide realtime translation opens the career opportunities beyond the courtroom and depositions to captioning and beyond. Clark/Stark students learn to write realtime using a computerized stenography machine and to prepare transcripts using computer-aided (CAT) software. Students’ writing skills are perfected by utilizing a realtime learning practice and testing web environment along with many additional specialized drills, and students have access to an on-campus mock courtroom. Students are required to complete a significant internship prior to graduating, providing exposure to the judicial court reporting field in a real-world environment.

According to the National Court Reporters Association (NCRA), Court reporters earn an average of \$60,000 a year, though salaries can range up to and beyond \$80,000. Income varies according to the area in which a person lives, certifications earned, the kinds of reporting jobs, and experience of individual reporters.

Students with little or no computer background should enroll in a computer fundamentals course (consult with academic advisor) as a preparatory course before taking other computer courses.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Judicial Court Reporting, a graduate will be able to:

- Write a realtime translation theory.
- Read aloud from shorthand notes quickly and accurately.
- Demonstrate knowledge of basic hardware care, maintenance, and setup of a realtime system.
- Demonstrate an understanding and application of law and legal terminology, anatomy and/or medical terminology, and current events.
- Perform skills in reporting procedures, transcript production, and operating practices in the role of the realtime reporter.
- Demonstrate knowledge of professional issues, continuing education, and the NCRA Code of Professional Ethics.
- Write and transcribe testimony at 225 wmp with at least 95 percent accuracy.
- Write and transcribe jury charge at 200 wpm with at least 95 percent accuracy.
- Write and transcribe literary at 180 wpm with at least 95 percent accuracy.

- Perform 75 hours of verified internship, preparing a 40-page complete, accurate transcript, and summarizing the experience in a written narrative.

### Scholastic Preparation

Prospective students should be disciplined, self-motivated, computer-literate, and possess above-average language skills. They also need to be able to meet deadlines, work well under pressure, and concentrate for long periods of time.

### Graduation Requirements

The Judicial Court Reporting program is approved by the National Court Reporters Association (NCRA). This association’s requirements are met or exceeded with the following standards:

- The student shall pass three five-minute tests with a minimum of 95-percent accuracy at each of the following speeds: 225 words per minute (wpm) testimony (two-voice), 200 wpm jury charge, and 180 wpm literary.
- The student shall complete at least 75 verified hours of internship under the supervision of a practicing professional judicial court reporter, composing a summary of complete experience as well as preparing a 40-page complete, accurate transcript from internship experience.
- The student shall prepare a five-page, first-pass transcript with a minimum of 95-percent accuracy.
- Clark State and Stark State reserve the right to change these standards when determined educationally expedient.

### Transfer Options

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor’s degree. A number of colleges or universities have designed bachelor’s completion programs designed for students completing applied degrees. See the Transfer section of the appropriate college catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
JCR 1001	Realtime Theory I	3
JCR 1002S	Realtime Theory II (SS)	3
AOT 121S	Office Document Concepts (SS)	3
AOT 130S	Editing, Proofreading, & Language Skills (SS)	3
ENG 1111	English I	3
FYE 1101	College Success	1
<b>Spring</b>		
JCR 1003	Realtime Theory Applications	3
JCR 1101	Skill Building I	3
JCR 131S	Legal Terminology (SS)	3
ITD 122S	Computer Applications for Professionals (SS)	3
MTH 1060	Business Mathematics	3
<b>Summer</b>		
JCR 1102S	Skill Building II (SS)	3
BIO 125S	Medical Terminology (SS)	3

**Fall**

JCR 2103	Skill Building III	3
JCR 2104S	Skill building IV (SS)	3
JCR 2200	Realtime Business Procedures	3
ENG 2211	Business Communication	3
PHL 122S	Ethics (SS)	3

**Spring**

JCR 2105	Skill Building V	3
JCR 2106S	Skill Building VI (SS)	3
JCR 2300	CAT Transcript Production	2
JCR 2400S	JCR Internship (SS)	2
- -	*Social/Behavioral Science Elective	3
	Total Credit Hours	65

Courses with an "S" in the course number denotes a Stark State course.

^Proficiency test available

\*Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*PLS 1100, Introduction to American Politics (Pre/Co: ENG 0980 grade of C+), PSY 1111, Psychology I (GA) (Pre/Co: ENG 0980 grade of C+; SOC 1110, Introduction to Sociology (GA) (Pre/Co: ENG 0980 grade of C+).

The program schedule that follows is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisor for help in planning their schedules.

A complete listing of humanities and social science electives is available in the Clark State College catalog.

**Legal Studies****Classes must be taken at both Clark State and Sinclair Community College to complete this program.**

The Legal Studies program prepares individuals to assist attorneys in the delivery of legal services. Someone who enjoys conducting research, solving problems, and communicating the results has good potential as a paralegal. Graduates are employed by private law firms, financial institutions, courts, prosecutors' offices, legal aid societies, public defenders' programs and corporate law offices.

Clark State cooperates with Sinclair Community College in offering the supporting courses for this AAS degree program. Students can take classes at Clark State concurrently with the Sinclair legal studies courses if they wish to complete the degree within a two-year time frame, or they can complete the supporting courses at Clark State first and then transfer to Sinclair to complete the program. Students are cautioned that once they begin the legal studies courses at Sinclair, it will still take two years to sequence through the legal studies courses. By taking course work at Clark State, students are able to minimize commuting time.

The [Legal Studies Program at Sinclair](#) is a limited-enrollment program and students must be accepted into the program before beginning paralegal courses. Students should contact the Dean of Business and Applied Technologies for information on applying to Sinclair's Legal Studies program and for academic advising while enrolled at Clark State.

Completion of the Paralegal Program does not authorize a graduate to practice law as an attorney.

The program layout below reflects the recommended sequence of courses for students planning to complete a degree within two years. Clark State courses may be completed concurrently with Sinclair courses or prior to enrolling at Sinclair. Sinclair courses are designated by SCC. The 32 credit hours at Clark State can be completed by a full-time student within one year provided he or she has few or no college preparatory requirements.

**Learning Outcomes**

Upon completion of the Paralegal program, a graduate will be able to:

- Competently conduct factual and legal research and communicate the results clearly and concisely.
- Competently prepare and interpret legal documents.
- Demonstrate competency in current technology.
- Exemplify a high standard of ethical and professional behavior individually and as a member of a legal team.

Course #	Course Title	Credit Hours
<b>Fall</b>		
ENG 1111	English I	3
ITS 1105	Computer Concepts and Software Applications	3
ENG 2211	Business Communication	3
--	PAR 1101 Paralegal Principles (SCC)	3
--	PAR 1102 Legal Technology (SCC)	1
--	PAR 1103 Litigation (SCC)	3
<b>Spring</b>		
ENG 1112	English II	3
MTH 1060	Business Mathematics	3
--	PAR 1201 Legal Research & Writing (SCC)	3
--	PAR 1202 Advanced Legal Technology (SCC)	1
--	PAR 1203 Advanced Litigation (SCC)	3
--	RES 1201 Real Estate Law (SCC)	3
<b>Summer</b>		
MGT 2600	Legal Environment of Business	3
PSY 1111	Introduction to Psychology	or
SOC 1110	Introduction to Sociology	3
--	PAR/LAW Elective (SCC)	3
<b>Fall</b>		
--	PAR 2301 Advanced Legal Research & Writing (SCC)	3
--	PAR 2302 Family Law (SCC)	3
--	PAR 2303 Probate Law (SCC)	3
--	Arts and Humanities Elective	3
<b>Spring</b>		
COM 1110	Interpersonal Communication I	3
--	PAR 2401 Paralegal Internship (SCC)	2
--	PAR/LAW Elective (SCC)	3
	Total Credit Hours	61

Total hours taken at Clark State: 27. Total hours taken at SCC: 38.

## Management

The Management curriculum provides a well-rounded education consisting of basic courses in accounting, information technology, economics, finance, business law, management, marketing, human resources, and operations. The associate degree in Management provides students with knowledge and skills for managing people, finances, and operations.

Students with significant business experience, where expertise equals or exceeds the outcomes of a particular course(s), are offered two options for earning experiential credit. Proficiency exams are available for selected courses. Other courses may allow a student to potentially earn credit through a portfolio presentation.

All business students are expected to use information technology skills as it applies to course requirements within all management options.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Management, a graduate will be able to do the following:

- Apply basic business and management concepts, skills, and tools.
- Demonstrate knowledge of social responsibility trends, ethical issues, and legal considerations
- Effectively use communications and human relations knowledge and skills.
- Analyze quantitative data.
- Demonstrate knowledge of global business trends.
- Demonstrate effective use of communication and human relations knowledge and skills.

### Graduation Requirements

A complete listing of humanities and social science electives is available in the College Catalog.

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
MGT 1060	Organizational Behavior	3
MGT 1105	Introduction to Business	2
ENG 1111	English I	3
FYE 1101	College Success	1
ITS 1105	Computer Concepts and Software Applications ^*	3
MTH 1060	Business Mathematics ^	3



**Spring**

MGT 1120	Principles of Management ^	3
MKT 2000	Marketing Management ^	3
ACC 1100	Introduction to Financial Accounting ^	or
ACC 1200	Managerial Accounting ^	4
ECO 2220	Principles of Microeconomics	3
ENG 1112	English II ***	or
ENG 2211	Business Communication ***	3

**Fall**

MGT 2000	Introduction to Project Management	or
MGT 2020	Quality Management	3
MGT 2600	Legal Environment of Business	3
ECO 2210	Principles of Macroeconomics	3
HRM 1725	Human Resource Management	3
MGT 2450	Data Analytics ***	or
STT 2640	Elementary Statistics I ***	3

**Spring**

MGT 2270	Business Finance	3
MGT 2650	Negotiation Skills or Co-op or Tech Elective****	3
MGT 2800	Business Strategy/Policy Seminar (Capstone)	3
LSC 2270	Operations Management	3
- -	Arts/Humanities Elective (GA)**	3
	Total Credit Hours	61

^Prior Learning Assessment (PLA) Credit Available

\*Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*Must be a global awareness (GA) course and come from arts/humanities courses identified in the Catalog

\*\*\*Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institutions's degree requirements.

\*\*\*\*Technical electives must total appropriate number of hours assigned. They can come from any combination of courses not already prescribed that use the following course codes: HRM, INS, LSC, MGT, MKT, ACC, CSD, CSE, EBE (except EBE 1100), ITS (except ITS 0700, ITS 0710, ITS 1105), NTK, OAD, and RES.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic or faculty advisors for help in planning their schedules.

Students should follow the recommended sequencing of courses, with consideration to the pre/co-requisites, including college preparatory requirements.

## Management - Human Resource Management Option

The Human Resource Management option provides students with a well-rounded education. It consists of basic management courses complemented with in-depth studies of human resource management, staffing, training and development, employment law, and compensation and benefits. The program is academically aligned with the Society for Human Resources Management (SHRM) - a widely respected standard for HR excellence.

The Human Resource Management curriculum is designed to equip students with knowledge and practical skills for managing a company's human resource function. The program schedule that follows is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules. All business students are expected to use information technology skills as it applies to course requirements within all management options.

**Embedded Certificate**

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

**Degree Availability**

The Human Resource Management option is available in a combination of online, hybrid, and traditional formats. Traditional format is offered during the day and evening at the Greene Center Campus as well as the Springfield Campus. Students should consult with an advisor for the recommended sequencing of courses.

**Learning Outcomes**

Upon completion of an Associate of Applied Business degree in the Human Resource Management option, a graduate will be able to do the following:

- Analyze quantitative data.
- Apply basic business and management concepts, skills, and tools.
- Demonstrate knowledge of global business trends.
- Demonstrate knowledge of social responsibility trends, ethical issues, and legal considerations
- Apply knowledge and skills in four functional areas of human resources including staffing, training and development, employment law, and compensation and benefits.
- Demonstrate effective use of communication and human relations knowledge and skills.

**Scholastic Preparation**

Students with significant business experience, where expertise equals or exceeds the outcomes of a particular course(s), are offered two options for earning experiential credit. Proficiency exams are available for selected courses. Other courses may allow a student to potentially earn credit through a portfolio presentation.

## Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

### Course # Course Title Credit Hours

#### Fall

MGT 1060	Organizational Behavior	3
ENG 1111	English I	3
FYE 1101	College Success	1
ITS 1105	Computer Concepts and Software Applications ^*	3
MTH 1060	Business Mathematics ^	3
- -	Arts/Humanities Elective (GA)**	3

#### Spring

MGT 1120	Principles of Management ^	3
HRM 1725	Human Resource Management	3
ACC 1000	Accounting Concepts ^*****	or
ACC 1100	Introduction to Financial Accounting ^*****	3
ECO 2220	Principles of Microeconomics	3
ENG 1112	English II ***	or
ENG 2211	Business Communication ***	3

#### Fall

HRM 2300	Training and Development	3
HRM 2350	Employment Law	3
MKT 2000	Marketing Management	3
MGT 2450	Data Analytics	or
STT 2640	Elementary Statistics I	3
COM 1110	Interpersonal Communication I	or
COM 1120	Public Speaking I	3
EBE 1000	Employability Skills	1

#### Spring

HRM 2400	Staffing	3
HRM 2450	Compensation and Benefits	3
MGT 2000	Introduction to Project Management	or
MGT 2650	Negotiation Skills	3
MGT 2800	Business Strategy/Policy Seminar (Capstone)	3
- -	ACC 1300, MGT 1105, MGT 1115 or EBE 2702	2
	Total Credit Hours	61

^Prior Learning Assessment (PLA) Credit Available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*Must be a global awareness (GA) course and come from arts/humanities courses identified in the Catalog.

\*\*\* Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institution's degree requirements.

\*\*\*\*Students who plan to complete a baccalaureate degree in the future should opt to take ACC 1100, Introduction to Financial Accounting.

## Management - Logistics and Supply Chain Management Option

The Logistics and Supply Chain Management (LSC) option provides a well-rounded education consisting of basic management courses with concentrated studies in purchasing, logistics, negotiation, supply chain management, and inventory/materials management. The associate degree in LSC provides students with fundamental knowledge and skills for managing the logistics and supply chain functions in both profit and not-for-profit organizations/businesses.

Supply Chain Management is the coordinated management and control of the supply chain (the process of supplying a product to a customer), from the acquisition of raw materials from vendors through their transformation into finished goods to the delivery of merchandise to the final customer. It involves information sharing, planning, resource synchronization, and performance measurement.

Logistics is the process of planning, implementing, and controlling the efficient and cost-effective flow and storage of raw materials, in-process stocks, finished goods, and related information from the point of origin to the point of consumption for customers. It is the science and art of ensuring that the right products reach the right place in the right quantity at the right time in order to satisfy consumer demand.

All business students are expected to use information technology skills as it applies to course requirements within all management options.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

The Logistics and Supply Chain Management program is available during the day and the evening, is offered online, and is available on all campuses. Students should consult with their advisor for the recommended sequencing of courses.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Management - Logistics and Supply Chain Management option, a graduate will be able to do the following:

- Apply basic business and management concepts, skills, and tools.
- Analyze quantitative data.
- Demonstrate knowledge of social responsibility trends, ethical issues, and legal considerations
- Demonstrate knowledge of global business trends.
- Demonstrate effective use of communication and human relations knowledge and skills.
- Demonstrate effective use of knowledge and skills in inventory and materials management, purchasing and supply strategies, negotiation strategies, and logistics and physical distribution.

### Career Options

Find entry-level to supervisory-level positions in purchasing, logistics, negotiation, and inventory/materials management. Some of the a range of job titles in a career in LSC are: buyer/purchasing agent, freight specialist, shipping-receiving clerk, inventory planner, outbound operations manager, transportation coordinator, warehouse supervisor, distribution manager, management analyst, and customer service manager.

### LSC Functional Career Competencies

Professionalism, networking, basics of LSC, transportation, warehousing, materials handling, packaging, inventory planning, supply forecasting, reverse logistics, environmental management, purchasing, contracting, production, product decisions, pricing, customer relationship management, problem solving, functions of management, risk management, quality management, business law, ethics, legal issues, economics, demand forecasting, information technology support, teamwork, and entrepreneurial processes.

Prospective and current students are encouraged to research career opportunities at the Ohio Department of Education's Career Pathways website. A Career Pathway is a collective look at education and training, wage and outlook information for Logistics and Supply Chain Management occupations. These pathways offer an overview of the various career options along with education and training.

### Credentials/Professional Designations: Logistics and Supply Chain Management

- American Production and Inventory Control Society (APICS) - APICS now falls under the larger umbrella of [Association for Supply Chain Management](#).
- APICS Certified in Production and Inventory Management (CPIM) Program - Educational/Professional Prerequisites - None (no bachelor's degree or international equivalent is required.) Must pass CPIM exams.
- APICS Certified in Logistics, Transportation and Distribution (CLTD) Program - Educational/Professional Prerequisites - None (no bachelor's degree or international equivalent is required.) Must pass CLTD exams.
- Credentials/Professional Designations: Institute for [Supply Chain Management \(ISM\)](#)
- ISM Certified Professional in Supplier Diversity (CPSD). CPSD Criteria (Eligibility Requirements) - Five years of professional (non-clerical, nonsupport) supplier diversity or supply management experience. Must pass CPSD exams. Source: <http://www.apics.org/careers-education-professional-development/certification>

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
MGT 1060	Organizational Behavior	3
ENG 1111	English I	3
FYE 1101	College Success	1
ITS 1105	Computer Concepts and Software Applications ^*	3
MTH 1060	Business Mathematics ^	3
- -	Arts/Humanities Elective (GA) **	3
<b>Spring</b>		
MGT 1120	Principles of Management ^	3
MKT 2000	Marketing Management ^	3
ACC 1100	Introduction to Financial Accounting ^	4
ECO 2220	Principles of Microeconomics	3
ENG 1112	English II ***	or
ENG 2211	Business Communication ***	3
<b>Fall</b>		
LSC 2220	Logistics and Physical Distribution	3
LSC 1100	Introduction to Supply Chain Management	or
EBE 2703	Co-op Education I	3
MGT 2600	Legal Environment of Business	3
ITS 1245	Beginning Database	1
MGT 2450	Data Analytics ***	or
STT 2640	Elementary Statistics I ***	3
<b>Spring</b>		
LSC 2100	Purchasing and Supply Management	3
LSC 2270	Operations Management	3
MGT 2650	Negotiation Skills	3
MGT 2800	Business Strategy/Policy Seminar (Capstone)	3
ECO 2210	Principles of Macroeconomics	3
Total Credit Hours		60

^ Prior Learning Assessment (PLA) Credit Available.

\*Student with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\* Must be a global awareness (GA) course and come from arts/humanities courses identified in the catalog.

\*\*\*Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institution's degree requirements.

Students should follow the recommended sequencing of courses, with consideration to the pre/co-requisites, including college preparatory requirements.

## Management - Marketing Option

The Marketing option provides students with a well-rounded education. It includes a strong foundation in marketing, highlighting the major areas of marketing including product management, promotional and pricing strategies, and physical distribution.

All business students are expected to use information technology skills as it applies to course requirements within all management options.

### Degree Availability

The Marketing option is available during the day and in the evening as well as online. Students should consult with their advisor for the recommended sequencing of courses.

### Learning Outcomes

Upon completion of the Associate of Applied Business degree in Marketing, a graduate will be able to do the following:

- Apply basic business and management concepts, skills, and tools.
- Demonstrate knowledge of social responsibility trends, ethical issues, and legal considerations
- Analyze quantitative data.
- Demonstrate knowledge of global business trends.
- Apply knowledge and skills in the four Ps of marketing: product management, promotional strategies, pricing strategies, and logistics and physical distribution.
- Demonstrate effective use of communication and human relations knowledge and skills.

### Scholastic Preparation

Students with significant business experience, where expertise equals or exceeds the outcomes of a particular course(s), are offered two options for earning experiential credit. Proficiency exams are available for selected courses. Other courses may allow a student to potentially earn credit through a portfolio presentation.

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
MGT 1060	Organizational Behavior	3
ENG 1111	English I	3
FYE 1101	College Success	1
ITS 1105	Computer Concepts and Software Applications ^*	3
MTH 1060	Business Mathematics ^	3
- -	Arts/Humanities Elective (GA) **	3

### Spring

MKT 2000	Marketing Management ^	3
MGT 1120	Principles of Management ^	3
ACC 1100	Introduction to Financial Accounting ^	4
ECO 2220	Principles of Microeconomics	3
ENG 1112	English II ***	or
ENG 2211	Business Communication ***	3

### Fall

MKT 2550	Promotion & IMC Strategies	3
HRM 1725	Human Resource Management	or
LSC 2270	Operations Management	3
LSC 2220	Logistics and Physical Distribution	3
STT 2640	Elementary Statistics I ***	or
MGT 2450	Data Analytics ***	3
- -	Tech Elective	3

### Spring

MKT 2150	Product Management	3
MKT 2400	Electronic Business Applications	or
MKT 2450	Sales and Sales Management	3
MGT 2600	Legal Environment of Business	3
MGT 2800	Business Strategy/Policy Seminar (Capstone)	3
- -	MGT, MKT or EBE Elective ****	3
Total Credit Hours		62

^ Prior Learning Assessment (PLA) Credit Available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\* Must be a global awareness (GA) course and may come from arts/humanities courses identified in the catalog.

\*\*\* Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institution's degree requirements.

\*\*\*\* Technical electives must total appropriate number of hours assigned. They can come from any combination of courses not already prescribed that use the following codes: HRM, INS, LSC, MGT, MKT, ACC, CSD, CSE, EBE (except EBE 1100), ITS (except ITS 0700, ITS 0710, ITS 1105), NTK, OAD, and RES.

Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory requirements.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Management - Real Estate Broker Option

The Real estate broker option at Clark State prepares students to fulfill the requirements to sit for the Ohio Broker Examination. This option has the following requirements:

- Ohio Real Estate Law (40 hours)
- Ohio Real Estate Principles & Practices (40 hours)
- Real Estate Appraisal (20 hours)
- Real Estate Finance (20 hours)
- A Financial Management course
- A Human Resources or Personnel Management course
- An Applied Business Economics course
- A Business Law course

A minimum of two years of post-secondary education, or equivalent hours of (60) sixty semester or (90) ninety quarter hours. Courses #5 - 8 may be included in your post-secondary education.

To sit for the Ohio Real Estate Broker's License, an applicant must also have the following experience: Experience Requirements - 20 transactions  
The Division calculates the transactions to ensure the applicant meets a total of twenty by using the following formulas:

- Listing agent in the sale of property owned by another = 1/2 transaction
- Selling agent in the sale of property owned by another = 1/2 transaction
- Listing agent in the lease of commercial or industrial real estate owned by another for a term of at least one year = 1/2 transaction
- Procuring agent in the lease of commercial or industrial real estate owned by another for a term of at least one year = 1/2 transaction
- Listing and /or procuring agent in the lease of four residential real estate properties owned by another for a term of at least one-year = 1 transaction

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

The Real Estate courses are available online and traditionally during the evening. Other courses are available during the day and the evening in Springfield, at the Greene Center, and online. Each semester offers an 8-week A term, B term, 16- week C term with a 10-week D term offered during the summer. Students should consult with an advisor for the recommended sequencing of courses.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Real Estate Broker Program, a graduate will be able to do the following:

- Apply basic business and management concepts, skills, and tools.

- Demonstrate knowledge of social responsibility trends, ethical issues, and legal considerations
- Analyze quantitative data.
- Demonstrate knowledge of global business trends.
- Apply knowledge and skills in management and the four areas of Real Estate including principles, law, appraisal, and finance.
- Demonstrate effective use of communication and human relations knowledge and skills.

### Scholastic Preparation

Students with significant business experience, where expertise equals or exceeds the outcomes of a particular course(s), are offered two options for earning experiential credit. Proficiency exams are available for selected courses. Other courses may allow a student to potentially earn credit through a portfolio presentation.

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
RES 1100	Real Estate Principles	3
RES 1200	Real Estate Law	3
ACC 1100	Introduction to Financial Accounting ^	4
ENG 1111	English I	3
FYE 1101	College Success	1
<b>Spring</b>		
RES 1300	Real Estate Appraisal	2
RES 1400	Real Estate Finance	2
ECO 2210	Principles of Macroeconomics	3
ENG 1112	English II ***	or 3
ENG 2211	Business Communication ***	3
ITS 1105	Computer Concepts and Software Applications ^*	3
MTH 1060	Business Mathematics ^	3
<b>Fall</b>		
MGT 1060	Organizational Behavior	3
MGT 1120	Principles of Management ^	3
MKT 2000	Marketing Management	3
- -	Arts/Humanities (GA)**	3
<b>Spring</b>		
HRM 1725	Human Resource Management	3
MGT 2270	Business Finance	3
MGT 2600	Legal Environment of Business	3
MGT 2800	Business Strategy/Policy Seminar (Capstone)	3
STT 2640	Elementary Statistics I ***	or 3
MGT 2450	Data Analytics ***	3
- -	Co-Op or Technical Elective ****	3
	Total Credit Hours	60

^Prior Learning Assessment (PLA) Credit Available.



## New Media

New media brings together web design and development; social media; marketing, and digital content creation such as photography, video, audio, and animation. Students with this degree can flourish in the creator economy, build their own company online, or work in the field of Web Design, User Experience Design, Social Media Strategy, Digital Marketing, and Multimedia Content Production. The average salary of Web Developers and Digital Designers in the United States is \$71,930 (Bureau of Labor Statistics).

Graduates in new media need a balance of technical skills and aesthetic design sense with strong communication and personal skills to interact with their audience and clients. Employers in new media need skilled and intuitive creative problem solvers to help them adapt to this new technological age. Employees in New Media must have strong computer competencies to allow them to work remotely from home when this is needed.

The New Media program is a two-year computer intensive learning experience focusing on industry-standard practices. Students with little experience with computers should take special note of the "Academic Preparation" section.

The program course schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those requiring college preparatory courses, will need additional semesters of study. Students should consult their academic advisor for help in planning their schedules. Graduating new media students wishing to further build their skills could also receive an Associate of Applied Business in Graphic Design by completing an additional 10 courses in the Graphic Design curriculum and an Associate of Applied Business in New Media Web Design Option by completing an additional 8 courses.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in New Media, a graduate will be able to:

- Design websites with usability in mind.
- Manage a digital marketing design problem from conceptualization to finished project.
- Utilize industry standard software effectively for digital content creation.
- Use social media effectively as a strategic marketing tool.

### Scholastic Preparation

Students with little or no computer background should enroll in ITS 0700 Computer Fundamentals, as a preparatory course before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 Beginning Keyboarding.

\*Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*Must be a global awareness (GA) course and come from arts/humanities courses identified in the Catalog.

\*\*\*Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institution's degree requirements.

\*\*\*\* Technical electives must total appropriate number of hours assigned. They can come from any combination of courses not already prescribed that use the following course codes: HRM, INS, LSC, MGT, MKT, ACC, CSD, CSE, EBE (except EBE 1100), ITS (except ITS 0700, ITS 0710, ITS 1105), NTK, OAD, and RES.

The program schedule below is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog. Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory requirements.

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. Students who wish to continue with their education can apply for the Bachelor of Applied Science in Web Design and Development at Clark State. See the Bachelor's Degree section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NWM 1000	Introduction to New Media	2
NWM 1010	Social Media and Digital Interactivity	3
GPH 1001	Introduction to Graphic Design	3
ITS 1500	HTML and CSS	3
ENG 1111	English I	3
FYE 1101	College Success	1
<b>Spring</b>		
NWM 1005	Digital Aesthetics and User Experience	3
NWM 1020	Adobe for Web Professionals	3
NWM 1610	Web Design	3
GPH 1201	Electronic Imagery I	3
MKT 2000	Marketing Management	3
<b>Fall</b>		
NWM 2000	Digital Multimedia I	3
NWM 2400	Advanced Web Design	3
MTH 1060	Business Mathematics	3
MKT 2550	Promotion & IMC Strategies	3
COM 1120	Public Speaking I	3
<b>Spring</b>		
NWM 2010	Digital Multimedia II	3
NWM 2210	New Media Capstone	3
PSY 1111	Introduction to Psychology	3
ENG 2211	Business Communication	3
ART 1002	Art History II	3
Total Credit Hours		60

Note: It is extremely important that students save all work from the first term forward to enable them to build a portfolio in NWM 2400 and NWM 2210.

### New Media - Web Design Option

The New Media Web Design Option focuses on teaching front-end web interface design skills with the necessary programming skills needed to obtain work as a Front-End Web Developer or User Experience Designer. Graduates in the New Media Web Design Option need a balance of technical skills and aesthetic design sense with strong communication and personal skills to interact with clients. Employers in new media need skilled and intuitive creative problem solvers to help them adapt to this new technological age. Employees in New Media must have strong computer competencies to allow them to work remotely from home when this is needed. The average salary for Web and Digital Interface Designers in Ohio is \$80,100.

The New Media program is a two-year computer intensive learning experience focusing on industry-standard practices. Students with little experience with computers should take special note of the "Academic Preparation" section below.

The program course schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those requiring college preparatory courses, will need additional semesters of study. Students should consult their academic advisor for help in planning their schedules. Graduating new media web design option students wishing to further build their skills could complete the Bachelor of Applied Science in Web Design and Development - Web Design Concentration. Graduates could also receive an Associate of Applied Business in New Media by completing an additional 4 courses, an Associate of Applied Business in Graphic Design by completing an additional 12 courses in the Graphic Design curriculum and an Associate of Applied Business in Computer Software Development by completing an additional 10 courses in the Computer Software Development Curriculum.

#### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

#### Learning Outcomes

Upon completion of an Associate of Applied Business degree in New Media - Web Design Option, a graduate will be able to:

- Design websites with usability in mind.
- Manage a digital marketing design problem from conceptualization to finished project.
- Utilize industry standard software effectively for digital content creation.
- Write computer programs to implement information systems designs.

#### Scholastic Preparation

New Media Web Design Option students need a high school algebra background equivalent to MTH 0750 Algebra for STEM majors (or MTH 0550 if a grade of C or higher has not been earned in MTH 0750 and ENG 0980

with a grade of C or higher). Students with little or no computer background should enroll in ITS 0700 Computer Fundamentals, as a preparatory course before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 Beginning Keyboarding.

### Transfer Options

Students enrolled in Associate of Applied Business degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. Some colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

### Course # Course Title Credit Hours

#### Fall

NWM 1000	Introduction to New Media	2
GPH 1001	Introduction to Graphic Design	3
CSD 1510	Programming Fundamentals with Python	3
ITS 1500	HTML and CSS	3
ENG 1111	English I	3
FYE 1101	College Success	1

#### Spring

NWM 1005	Digital Aesthetics and User Experience	3
NWM 1020	Adobe for Web Professionals	3
NWM 1610	Web Design	3
CSD 1600	JavaScript and jQuery	3
ITS 1105	Computer Concepts and Software Applications ^	3

#### Fall

NWM 1010	Social Media and Digital Interactivity	3
NWM 2000	Digital Multimedia I	or
MKT 2000	Marketing Management	3
NWM 2400	Advanced Web Design	3
CSD 1300	Database Management	2
CSD 1310	SQL I	2
CSD 2521	Java Programming I	3

#### Spring

CSD 2800	Advanced Topics	3
ART 1002	Art History II	3
COM 1120	Public Speaking I	3
PSY 1111	Introduction to Psychology	3
STT 2640	Elementary Statistics I	3
	Total Credit Hours	61

^Proficiency test available.

Note: It is extremely important that students save all work from the first term forward to enable them to build a portfolio in NWM 2400.

## Office Administration

Office administrators function in a continually shifting role in a variety of office settings because of changing technology, the emphasis on greater efficiency and productivity. With this shift generally comes greater responsibility that is reflected in the duties of the office administrator, which may include integrated computer software applications; organization and scheduling; internet/intranet communications and research; document preparation, storage, and retrieval; and customer service and human relations.

Today's office administrators often purchase office equipment and supplies; plan meetings and special events; work closely with vendors and suppliers; orient, and supervise other staff; write and edit documents; coordinate direct mailings; maintain multiple schedules and calendars; handle messages and correspondence; and maintain computer files, directories, and databases.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Office Administration, a graduate will be able to:

- Compose and produce quality business documents using technology.
- Perform office administrative functions using critical thinking, management, prioritizing, and organizational skills.
- Demonstrate good oral communication skills.
- Demonstrate good human relations skills, including customer service, teamwork, and ethics.

### Scholastic Preparation

Office Administration students should possess basic computer skills: use a keyboard, mouse, external storage device, and a printer; differentiate among drives, folders, and files; employ a username and password. Students lacking in any of these areas should enroll in ITS 0700, Computer Fundamentals, prior to enrolling in any OAD or other ITS courses. Students should also be able to type at least 35 words per minute on a five-minute timed writing. Students who cannot meet this standard should enroll in ITS 0710 Keyboarding prior to enrolling in any OAD or other college level ITS course. Students who cannot meet the 35 word per-minute standard on the first day of OAD 1101 will be required to withdraw and enroll in ITS 0710. ITS 0700 and ITS 0710 are considered preparatory courses to assist with successfully entering the Office Administration Program and do not count toward the degree.

### Transfer Options

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed

bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
OAD 1101	Document Production I ^**	3
OAD 1205	Office Procedures	3
MGT 1115	Customer Relations	2
ENG 1111	English I	3
ACC 1000	Accounting Concepts	3
FYE 1101	College Success	1
<b>Spring</b>		
OAD 1102	Document Production II ^	3
OAD 1105	Business English ^	4
MGT 1105	Introduction to Business	2
MTH 1060	Business Mathematics ^	3
ITS 1105	Computer Concepts and Software Applications ^*	3
<b>Fall</b>		
COM 1120	Public Speaking I	3
EBE 1000	Employability Skills	1
ENG 2211	Business Communication	3
ITS 1205	Windows Concepts	1
MGT 1060	Organizational Behavior ^	3
SOC 1110	Introduction to Sociology	or
SPN 1100	Survival Spanish	3
<b>Spring</b>		
OAD 2703	Co-op Education/Internship	3
MGT 1120	Principles of Management	3
HRM 1725	Human Resource Management	3
PSY 1111	Introduction to Psychology	3
ITS 1238	Intermediate Spreadsheet	2
COM 1110	Interpersonal Communication I	or
COM 1170	Small Group Communication	3
Total Credit Hours		61

^Proficiency test available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*Proficiency test available. Students must pass a 3-minute time writing test with speed of 35 NWPM.

Students should follow the recommended sequencing of courses, with consideration to the pre/co-requisites, including college preparatory (CPE) requirements. A complete listing of humanities and social science electives is available in the College Catalog.

## Professional Services Management

The Associate of Technical Studies in Professional Services Management offers individuals who hold licensure in professional areas such as cosmetology, various building trades, auto services, or other areas to receive up to nine credit hours toward an Associate of Technical Studies degree with a focus in the management of the business operation related to the professional area. Students coming from high school career programs or trade school programs that result in licensure as well as long-term professionals will be interested in this degree option. Students will receive college credit for their professional knowledge while pursuing an education that will provide them the tools with which to successfully launch and manage their own business.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

The Professional Services ATS degree is available during the day and in the evening.

### Scholastic Preparation

Interested students should contact the academic dean of Business and Applied Technologies early to determine the number of credits that will be applied toward their degree based upon the licensure held. Students will need to provide proof of current licensure. In addition, students are responsible for providing any information related to their licensure that is needed by the academic dean in order to determine the number of credits to be awarded. Once the credit hours applied to the licensure are determined, the student will work with the academic dean who will approve any additional coursework in the professional area.

Course #	Course Title	Credit Hours
<b>Fall</b>		
MGT 1060	Organizational Behavior	3
ENG 1111	English I	3
FYE 1101	College Success	1
ITS 1105	Computer Concepts and Software Applications ^*	3
MTH 1060	Business Mathematics ^	3
- -	Arts/Humanities Elective (GA)**	3
<b>Spring</b>		
MGT 1120	Principles of Management ^	3
ACC 1100	Introduction to Financial Accounting ^	4
ECO 2220	Principles of Microeconomics	3
ENG 1112	English II ***	or
ENG 2211	Business Communication ***	3
MKT 2000	Marketing Management ^	3
<b>Fall</b>		
MGT 1115	Customer Relations	2
MGT 2600	Legal Environment of Business	3
MGT 2800	Business Strategy/Policy Seminar (Capstone)	3
HRM 1725	Human Resource Management	3
- -	Professional Electives*****	6

## Spring

MGT 2000	Introduction to Project Management	or
MGT 2650	Negotiation Skills	3
MGT 2140	Small Business Management	3
ACC 1200	Managerial Accounting	4
- -	Professional Electives*****	3
	Total Credit Hours	62

^ Prior Learning Assessment (PLA) Credit available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\* Must be a global awareness (GA) course and come from arts/humanities courses identified in the Catalog.

\*\*\* Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institution's degree requirements.

\*\*\*\*\* A total of 9 semester hours must be earned from the professional area. The 9 hours can be earned from professional licensure. Any of the 9 hours not granted for the licensure may come from a field related to the licensure or business courses approved by the division. See the Dean of Business and Applied Technologies to have your professional license evaluated for the number of credit hours that will apply and for approval of any licensure- and business-related courses.

Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory (CPE) requirements.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many students, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisor for help in planning their schedules.

A complete listing of arts and humanities electives can be found in the College Catalog.

# BUSINESS CERTIFICATES

## Accounting Certificate

Accounting, long referred to as the "language of business," is an excellent foundation for any type of office position. Most managerial positions require an understanding of accounting. This program provides the basic courses that teach fundamentals of recording business transactions, the balance sheet, the income statement, and basic cost accounting concepts/entries. Courses are applicable to the associate degree program.

### Learning Outcomes

Upon completion of an Accounting certificate, a graduate will be able to:

- Demonstrate the ability to utilize and apply technology as it impacts the accounting profession.
- Demonstrate an understanding of the basic concepts of managerial and cost accounting and their roles in business and decision making.
- Interpret, analyze, and present reliable and relevant information to financial statement users based upon generally accepted accounting principles both manually and electronically.

### Scholastic Preparation

Students with little or no computer background should enroll in ITS 0800 Computer Fundamentals, as a preparatory course before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 1210 Keyboarding/Word Processing.

Course #	Course Title	Credit Hours
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#### Summer

ACC 1100	Introduction to Financial Accounting	4
FYE 1100	College Success	1

#### Fall

ACC -	Accounting Elective 2-4 credit hours	3
COM 1110	Interpersonal Communication I	3
EBE 1000	Employability Skills	1
ENG 1111	English I	3
ITS 1235	Beginning Spreadsheet *	1
MTH 1060	Business Mathematics	3

#### Spring

ACC 1200	Managerial Accounting	4
ACC 1400	Computerized Accounting	3
ACC 2000	Spreadsheet Accounting	3
ENG 2211	Business Communication	3
	Total Credit Hours	32

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

The program schedule that follows is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations.

Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.



## Accounting Executive Option Departmental Certificate

This certificate is available to those who already hold an associates degree or higher. It will provide the student with the essential skills necessary to work in the growing field of Accounting. Students can fully apply the courses in this one year certificate towards the completion of the full two-year Accounting degree.

### Learning Outcomes

Upon completion of an Accounting Executive Option departmental certificate, a graduate will be able to:

- Demonstrate an understanding of the basic concepts of managerial and cost accounting and their roles in business and decision making.
- Interpret, analyze, and present reliable and relevant information to financial statement users based upon generally accepted accounting principles both manually and electronically.

Course #	Course Title	Credit Hours
<b>Summer</b>		
ACC 1100	Introduction to Financial Accounting	4
<b>Fall</b>		
- -	ACC Elective 2-4 credit hours	3
MTH 1060	Business Mathematics	3
<b>Spring</b>		
ACC 1200	Managerial Accounting	4
ACC 1400	Computerized Accounting	3
- -	ACC or MGT Elective	3
	<b>Total Credit Hours</b>	<b>20</b>

## Banking Departmental Certificate

The Banking certificate provides students with an overview of the banking industry and a background for understanding. It provides them with the foundational knowledge of investments, consumer lending, and customer relations.

### Learning Outcomes

Upon completion of this certificate, a student will be able to do the following:

- Demonstrate knowledge of social responsibility trends, ethical issues, and legal considerations
- Effectively use communications and human relations knowledge and skills.
- Demonstrate knowledge of the banking industry.

Course #	Course Title	Credit Hours
<b>Fall</b>		
BNK 1000	Principles of Banking	3
ACC 1100	Introduction to Financial Accounting ^	4
ENG 1111	English I	3
MGT 1100	Personal Finance	3
MGT 1115	Customer Relations	2
<b>Spring</b>		
BNK 1100	Consumer Lending	3
BNK 2000	Introduction into Investments	3
BNK 2100	Money & Banking	3
ECO 2210	Principles of Macroeconomics	3
ITS 1105	Computer Concepts and Software Applications ^*	3
	<b>Total Credit Hours</b>	<b>30</b>

^Prior Learning Assessment (PLA) Credit Available.

\*Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

## Consumer Lending Departmental Certificate

This certificate provides students with an understanding of consumer lending in the banking industry. It provides them with the foundational knowledge including the principles of banking, accounting, consumer lending, and economics.

### Learning Outcomes

Upon completion of this certificate, a student will be able to do the following:

- Demonstrate understanding of consumer lending in the banking environment.
- Effectively use communications and human relations knowledge and skills.
- Demonstrate knowledge of the banking industry.

Course #	Course Title	Credit Hours
BNK 1000	Principles of Banking	3
BNK 1100	Consumer Lending	3
ACC 1100	Introduction to Financial Accounting ^	4
ECO 2210	Principles of Macroeconomics	3
	Total Credit Hours	13

^Prior Learning Assessment (PLA) Credit Available.

## Customer Service Short-Term Technical Certificate

This certificate is focused on developing the essential skills and knowledge needed by anyone desiring to provide excellent service to customers, both internal and external. This is particularly focused on meeting needs and expectations of an organization's customers. All courses can be applied to the associate degree in Management. Students should follow the recommended sequencing of courses, with consideration to the pre/co-requisites, including college preparatory (CPE) requirements.

All business students are expected to use information technology skills as it applies to course requirements within all management options.

### Learning Outcomes

Upon completion of this certificate, a student will be able to do the following:

- Apply basic business and management concepts, skills, and tools.
- Effectively use communications and human relations knowledge and skills.
- Listen and speak in a professional manner to customers.

Course #	Course Title	Credit Hours
<b>Fall</b>		
MGT 1060	Organizational Behavior	3
MGT 1115	Customer Relations	2
HRM 1725	Human Resource Management	3
ENG 1111	English I	3
<b>Spring</b>		
MGT 1120	Principles of Management ^	3
MGT 2000	Introduction to Project Management	or
MGT 2020	Quality Management	or
MGT 2650	Negotiation Skills	3
ITS 1105	Computer Concepts and Software Applications ^*	3
	Total Credit Hours	20

^ Prior Learning Assessment (PLA) Credit Available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

## Human Resource Management Departmental Certificate

This certificate is focused on developing the essential knowledge and skills needed by an individual who wants to work in the human resource field. Because of prerequisite requirements, it will generally take more than one academic year to complete. All courses can be applied to the Human Resource Management Option of the associate degree in Management. Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory (CPE) requirements.

All business students are expected to use information technology skills as it applies to course requirements within all management options.

### Learning Outcomes

Upon completion of this certificate, a student will be able to do the following:

- Apply knowledge and skills in four functional areas of human resources including staffing, training and development, employment law, and compensation.
- Effectively use communications and human relations knowledge and skills.
- Research and apply human resource policies, practices, and programs.

Course #	Course Title	Credit Hours
<b>Fall</b>		
HRM 1725	Human Resource Management	3
HRM 2300	Training and Development	3
ENG 1111	English I	3
ITS 1105	Computer Concepts and Software Applications ^*	3
MGT 1060	Organizational Behavior	3
<b>Spring</b>		
HRM 2350	Employment Law	3
HRM 2400	Staffing	3
HRM 2450	Compensation and Benefits	3
MGT 2000	Introduction to Project Management	or
MGT 2650	Negotiation Skills	3
MTH 1060	Business Mathematics ^	3
	<b>Total Credit Hours</b>	<b>30</b>

^ Prior Learning Assessment (PLA) Credit Available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

## Logistics and Supply Chain Management Departmental Certificate

This certificate is focused on developing essential knowledge and skills needed by an individual who wants to work in the strategic planning and coordinating of activities that include sourcing and procurement of materials and services, transformation activities and logistics for the purpose of integrating supply and demand management. Because of prerequisite requirements, it will generally take more than one academic year to complete. All courses can be applied to the associate degree in Logistics and Supply Chain Management. Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory (CPE) requirements.

All business students are expected to use information technology skills as it applies to course requirements within all management options.

### Learning Outcomes

Upon completion of the Logistics and Supply Chain Management departmental certificate, a graduate will be able to:

- Apply basic business and management concepts, skills, and tools.
- Demonstrate knowledge of global business trends
- Effectively use knowledge and skills in inventory and materials management, purchasing and supply strategies, negotiation strategies, and logistics and physical distribution.

Course #	Course Title	Credit Hours
<b>Fall</b>		
MGT 1060	Organizational Behavior	3
MGT 1120	Principles of Management ^	3
ENG 1111	English I	3
ITS 1105	Computer Concepts and Software Applications ^*	3
MTH 1060	Business Mathematics ^	3
<b>Spring</b>		
LSC 1100	Introduction to Supply Chain Management	3
LSC 2270	Operations Management	3
MGT 2650	Negotiation Skills	3
ENG 1112	English II ***	or
ENG 2211	Business Communication ***	3
<b>Fall</b>		
LSC 2100	Purchasing and Supply Management	3
LSC 2220	Logistics and Physical Distribution	3
MGT 2600	Legal Environment of Business	3
	<b>Total Credit Hours</b>	<b>36</b>

^ Prior Learning Assessment (PLA) Credit Available.

\*Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*\* Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institution's degree requirements.

\*\*\*\*Technical electives must total appropriate number of hours assigned. They can come from any combination of courses not already prescribed that use the following course codes: HRM, INS, LSC, MGT, MKT, ACC, CSD, CSE, EBE (except EBE 1100), ITS (except ITS 0700, ITS 0710, ITS 1105), NTK, OAD, and RES. ACC 1300 is recommended for HRM students.

## Management Certificate

The Management certificate provides students with an overview of the business environment and a background for understanding and managing people. It provides them with the foundational knowledge of accounting and financial issues needed by all managers. All courses taken for this certificate are applicable to the associate degree in Management.

All business students are expected to use information technology skills as it applies to course requirements within all management options.

### Learning Outcomes

Upon completion of the Management certificate, a graduate will be able to do the following:

- Apply basic business and management concepts, skills, and tools.
- Analyze quantitative data.
- Be prepared to enter the workforce with entry-level management skills.

Course #	Course Title	Credit Hours
<b>Fall</b>		
MGT 1060	Organizational Behavior	3
MGT 1105	Introduction to Business	2
ENG 1111	English I	3
ITS 1105	Computer Concepts and Software Applications ^*	3
MTH 1060	Business Mathematics ^***	or
STT 2640	Elementary Statistics I ^***	or
MGT 2450	Data Analytics ^***	3
<b>Spring</b>		
MGT 1120	Principles of Management ^	3
MGT 2000	Introduction to Project Management	or
MGT 2020	Quality Management	3
ACC 1100	Introduction to Financial Accounting ^	or
ACC 1200	Managerial Accounting ^	4
ENG 1112	English II ***	or
ENG 2211	Business Communication ***	3
- -	Arts/Humanities or Social/Behavioral Science elective (GA)**	3
- -	Technical Elective ****	3
	<b>Total Credit Hours</b>	<b>33</b>

^ Prior Learning Assessment (PLA) Credit available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\* Must be a global awareness (GA) course identified in the catalog.

\*\*\* Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institution's degree requirements.

\*\*\*\* Technical electives must total appropriate number of hours assigned. They can come from any combination of courses not already prescribed that use the following course codes: BNK, HRM, INS, LSC, MGT, MKT, ACC, CSD,

CSE, EBE (except EBE 1100), ITS (except ITS 0700, ITS 0710, ITS 1105), NTK, OAD, and RES.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisor for help in planning their schedules.

Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory (CPE) requirements.

## Marketing Departmental Certificate

This certificate is focused on developing the essential knowledge and skills needed by an individual who wants to work in the marketing field. Because of prerequisite requirements, it will generally take more than one academic year to complete. All courses can be applied to the associate degree in Marketing. Students should follow the recommended sequencing of courses, with consideration to the pre/co-requisites, including college preparatory (CPE) requirements.

All business students are expected to use information technology skills as it applies to course requirements within all management options.

### Learning Outcomes

Upon completion of the Marketing departmental certificate, a graduate will be able to do the following:

- Apply basic business and management concepts, skills, and tools.
- Demonstrate knowledge of social responsibility trends, ethical issues, and legal considerations
- Apply knowledge and skills in the four Ps of marketing: product management, promotional strategies, pricing strategies, and logistics and physical distribution.

Course #	Course Title	Credit Hours
<b>Fall</b>		
MKT 2000	Marketing Management ^	3
MGT 1120	Principles of Management ^	3
ACC 1100	Introduction to Financial Accounting ^	4
ITS 1105	Computer Concepts and Software Applications ^*	3
MTH 1060	Business Mathematics ^	3
<b>Spring</b>		
MKT 2150	Product Management	3
MKT 2400	Electronic Business Applications	3
MGT 2020	Quality Management	3
MGT 2450	Data Analytics ***	or
STT 2640	Elementary Statistics I ***	3
<b>Fall</b>		
MKT 2550	Promotion & IMC Strategies	3
LSC 2220	Logistics and Physical Distribution	3
	<b>Total Credit Hours</b>	<b>34</b>

^Prior Learning Assessment (PLA) Credit Available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*\*Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institution's degree requirements.



## New Media Web Design Departmental Certificate

This certificate provides the knowledge and skills necessary to do web design.

### Learning Outcomes

Upon completion of the New Media Web Design Departmental Certificate, a graduate will be able to:

- Design websites with usability in mind.
- Manage a digital marketing design problem from conceptualization to finished project.

Course #	Course Title	Credit Hours
<b>Fall</b>		
GPH 1001	Introduction to Graphic Design	3
ITS 1500	HTML and CSS	3
<b>Spring</b>		
NWM 1005	Digital Aesthetics and User Experience	3
NWM 1020	Adobe for Web Professionals	3
NWM 1610	Web Design	3
<b>Fall</b>		
NWM 1010	Social Media and Digital Interactivity	3
NWM 2400	Advanced Web Design	3
	Total Credit Hours	21

## Professional Office Administration Certificate

A one-year certificate in Office Administration is available for students who need a quicker entry into the job market. This will provide the student with the skills needed for entry-level positions in today's computer-oriented and fast-paced business office. Students can fully apply this one-year certificate toward the completion of either the Office Administration or the Medical Office Administration associate degree programs. This certificate can be earned through a combination of evening and online courses.

### Learning Outcomes

Upon completion of Professional Office Administration certificate, a graduate will be able to:

- Compose and produce quality business documents using technology.
- Perform office administrative functions using critical thinking, management, prioritizing, and organizational skills.
- Demonstrate good human relations skills, including customer service, teamwork, and ethics.

### Scholastic Preparation

Office Administration certificate students should have basic computer skills: use a keyboard, mouse, external storage device, and a printer; differentiate among drives, folders, and files; employ a username and password. Students lacking in any of these areas should enroll in ITS 0800 Computer Fundamentals, prior to enrolling in any OAD or other ITS courses.

Students should also be able to type at least 35 words per minute on a five-minute timed writing. Students who cannot meet this standard should enroll in ITS 0810 Keyboarding or ITS 1210 Keyboarding/Word Processing prior to enrolling in any OAD or other college-level ITS course. Students who cannot meet the 35 word-per-minute standard on the first day of OAD 1101 will be required to withdraw and enroll in ITS 0810 or ITS 1210. ITS 0800, ITS 0810 and ITS 1210 are considered preparatory for starting the Office Administration certificate and do not count toward the certificate.

Course #	Course Title	Credit Hours
<b>Fall</b>		
OAD 1101	Document Production I ^**	3
OAD 1205	Office Procedures	3
ACC 1000	Accounting Concepts ^	3
ENG 1111	English I	3
<b>Spring</b>		
OAD 1102	Document Production II ^	3
OAD 1105	Business English ^	4
ITS 1105	Computer Concepts and Software Applications ^*	3
ITS 1238	Intermediate Spreadsheet ^	2
MGT 1120	Principles of Management	3
MTH 1060	Business Mathematics ^	3
	Total Credit Hours	30

^Proficiency test available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses.

Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*Proficiency test available. Students must pass a 3-minute timed writing test with speed of 35 NWP.

Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory requirements.

## Real Estate Short-Term Technical Certificate

This certificate focuses on four areas of real estate. Upon completion of this certificate, students have the option to be seated for the Ohio Division of Real Estate exam. Courses are offered in an eight (8) week format to be completed in either Fall, Spring or Summer Semester. The courses are applicable to the Associate of Applied Business degree as a Real Estate Broker.

- Real Estate Exam Prep
- Real Estate Sales License Continuing Education

### Learning Outcomes

Upon completion of the Real Estate short-term technical certificate, a graduate will be able to:

- Demonstrate understanding of Ohio Real Estate Law.
- Acquire knowledge of Ohio Real Estate Principles.
- Develop an understanding for Ohio Real Estate Appraisal and Finance.

Course #	Course Title	Credit Hours
RES 1100	Real Estate Principles	3
RES 1200	Real Estate Law	3
RES 1300	Real Estate Appraisal	2
RES 1400	Real Estate Finance	2
	Total Credit Hours	10

\* An appropriate compass placement, ACT, or SAT score will satisfy the respective CPE requirement.

Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory requirements.

## Small Business Departmental Certificate

This certificate is focused on developing the essential knowledge needed by an individual who wants to start a small business. It will provide the student with the necessary tools for developing a successful business operation. All courses can be applied to the associate degrees in Management or Marketing.

### Learning Outcomes

Upon completion of the Small Business departmental certificate, a graduate will be able to:

- Apply basic business and management concepts, skills, and tools.
- Demonstrate knowledge of social responsibility trends, ethical issues, and legal considerations

Course #	Course Title	Credit Hours
<b>Fall</b>		
MKT 2000	Marketing Management ^	3
MGT 1120	Principles of Management ^	3
ACC 1100	Introduction to Financial Accounting ^	or 4
ACC 1200	Managerial Accounting ^	4
ENG 1111	English I	3
ITS 1105	Computer Concepts and Software Applications ^*	3
<b>Spring</b>		
MKT 2400	Electronic Business Applications	3
MGT 1060	Organizational Behavior	or 3
MGT 2020	Quality Management	3
MGT 2140	Small Business Management	3
MGT 2600	Legal Environment of Business	3
ENG 1112	English II ***	or 3
ENG 2211	Business Communication ***	3
	Total Credit Hours	31

^Prior Learning Assessment (PLA) Credit Available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*\*Students who plan on transferring courses for advanced degree work should verify the best/appropriate course selection based on the receiving institution's degree requirements.

Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory requirements.

## Supervisory Departmental Certificate

This certificate is focused on developing the essential skills and knowledge needed by first-line supervisors. It will provide an individual the tools with which to motivate, challenge, and manage employees. All courses can be applied to the associate degree in Management.

### Learning Outcomes

Upon completion of an Supervisory departmental certificate, a graduate will be able to:

- Apply basic business and management concepts, skills, and tools.
- Analyze quantitative data.
- Be prepared to enter the workforce with entry-level supervisory skills.

Course #	Course Title	Credit Hours
<b>Fall</b>		
ACC 1100	Introduction to Financial Accounting	or 4
ACC 1200	Managerial Accounting	4
ITS 1105	Computer Concepts and Software Applications *	3
MGT 1060	Organizational Behavior	3
MGT 1105	Introduction to Business	2
<b>Spring</b>		
HRM 1725	Human Resource Management	3
MGT 2020	Quality Management	3
MGT 1120	Principles of Management	3
PSY 1111	Introduction to Psychology	3
	Total Credit Hours	24

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses.

Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class. Students should follow the recommended sequencing of courses, with consideration to the pre/co-requisites, including college preparatory (CPE) requirements.

## Supply Chain Management Departmental Certificate

This post-degree certificate program is designed for students who already hold a bachelor's degree and are looking to meet their educational and professional development (career broadening) needs relative to logistics and supply chain management. Functional areas covered include: contracting and negotiation, social responsibility, performance management, forecasting, materials and inventory management, transportation and distribution, assessment, planning product and service, development, quality, strategic sourcing, and risk compliance. These foundational topics are often considered by many professional certification organizations as the inner core to the understanding of the logistics and supply chain management career field.

### Learning Outcomes

Upon completion of Supply Chain Management departmental certificate, a graduate will be able to:

- Apply basic business and management concepts, skills, and tools.
- Demonstrate knowledge of global business trends
- Effectively use knowledge and skills in inventory and materials management, purchasing and supply strategies, negotiation strategies, and logistics and physical distribution.

Course #	Course Title	Credit Hours
<b>Fall</b>		
MGT 2020	Quality Management	3
ECO 2210	Principles of Macroeconomics	3
LSC 2220	Logistics and Physical Distribution	3
- -	LSC, MGT, MKT, ACC or ITS Technical Elective****	3
<b>Spring</b>		
MGT 2650	Negotiation Skills	3
ECO 2220	Principles of Microeconomics	3
LSC 2100	Purchasing and Supply Management	3
LSC 2270	Operations Management	3
MKT 2000	Marketing Management ^	3
	Total Credit Hours	27

^Prior Learning Assessment (PLA) Credit Available.

\*\*\*\* Technical electives must total appropriate number of hours assigned. They may come from any combination of courses not already prescribed that use the following course codes: HRM, INS, LSC, MGT, MKT, ACC, CSD, EBE (except EBE 1100), ITS (except ITS 0700, ITS 0710, ITS 1105), NTK, OAD, or RES. ACC 1300 is recommended for HRM students.

Students should follow the recommended sequencing of courses, with consideration to the pre/co-requisites, including college preparatory requirements.

## COMPUTER AND INFORMATION TECHNOLOGY

### Computer Networking

Information Technology is one of the fastest-growing career fields today. The Computer Networking curriculum prepares students to plan, design, implement, troubleshoot, and administer microcomputer-based networks. This curriculum can assist students in preparing for the following certifications: CompTIA (A+, Network+, Linux+, Security+, Project+); Microsoft Certified Professional, and Cisco Certified Network Associate. Computer Networking students can increase their learning (and earning) potential by participating in the cooperative education work-experience program. Through this program, students can spend up to two semesters working in the information technology field while earning college credits. Interested students should contact their academic advisor or the Office of Career Management for more information.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

This program is available during the day and evening. Contact your academic advisor about an evening curriculum guide. Some classes may be offered on Saturdays, however the entire degree can not be completed on weekends.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Computer Networking, a graduate will be able to do the following:

- Install, configure, manage, and maintain network infrastructure equipment and software.
- Demonstrate knowledge of computer and network systems terms and concepts.
- Install, configure, manage, maintain, and troubleshoot server computer systems.
- Setup, install, configure, and troubleshoot hardware/software for desktop computer systems.
- Install, configure, manage, and maintain network-based voice, audio, and video technologies.

### Scholastic Preparation

Students should possess mathematical skills and should be comfortable using technology. Students who do not possess basic computer and technology skills should take one or more of the following courses to improve their skill level in basic technology use: ITS 0700, ITS 0710, ITS 1105, ITS 1205. Students who have not completed a full sequence of high school mathematics may need to complete a series of college preparatory math classes.

### Transfer Options

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the

program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 1110	PC Hardware Essentials (A Term)	3
NTK 1120	PC Operating Systems Essentials (B Term)	3
MTH 1060	Business Mathematics	3
ENG 1111	English I	3
FYE 1101	College Success	1
- -	Arts/Humanities Electives	3

#### Spring

NTK 1211	Fundamentals of Networking (B Term)	3
CSE 1110	Introduction to Cybersecurity	3
CSE 1120	Cybersecurity - Security +	3
COM 1120	Public Speaking I	3
- -	Social/Behavioral Science Elective (GA) *	3

#### Fall

NTK 2105	Cisco Certified Network Associate I (A Term)	3
NTK 2115	Cisco Certified Network Associate II (B Term)	3
NTK 2220	Microsoft Client Administration	3
NTK 2222	Administering Microsoft Server	3
ENG 2211	Business Communication	3

#### Spring

NTK 2125	Cisco Certified Network Associate III (A Term)	3
NTK 2150	Cloud Technologies (B Term)	3
NTK 2212	Linux Server Administration	3
NTK 2890	Computer Networking Capstone or Co-Op Electives	3
MGT 2000	Introduction to Project Management	3
Total Credit Hours		61

^Proficiency test is available.

\* At least one social/behavioral science or arts/humanities elective must be a global awareness (GA) course.

The program schedule that follows is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Computer Networking - Technical Systems Support Option

Information Technology is one of the fastest-growing career fields today. The Technical Systems Support curriculum prepares students to support computer and network end users. This curriculum can assist students in preparing for the following certifications: CompTIA (A+, Network+, Linux+, Security+, Project+); Microsoft Certified Professional, and Cisco Certified Network Associate. Technical Systems Support students can increase their learning (and earning) potential by participating in the cooperative education work-experience program. Through this program, students can spend up to two semesters working in the information technology field while earning college credits. Interested students should contact their academic advisor or the Office of Career Management for more information.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

This program is available during the day and evening. Contact your academic advisor about an evening curriculum guide. Some classes may be offered on Saturdays, however the entire degree can not be completed on weekends.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Technical Systems Support, a graduate will be able to do the following:

- Demonstrate knowledge of computer and network systems terms and concepts.
- Setup, install, configure, and troubleshoot hardware/software for desktop computer systems.
- Install, configure, manage, maintain, and troubleshoot server computer systems.
- Install, configure, manage, and maintain network-based voice, audio, and video technologies.
- Demonstrate knowledge of computer and network security terms and concepts.
- Use and troubleshoot basic application software.

### Scholastic Preparation

Students should possess mathematical skills and should be comfortable using technology. Students who do not possess basic computer and technology skills should take one or more of the following courses to improve their skill level in basic technology use: ITS 0800, ITS 0810, ITS 1105, ITS 1210. Students who have not completed a full sequence of high school mathematics may need to complete a series of college preparatory math classes.

### Transfer Options

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed



bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 1110	PC Hardware Essentials (A Term)	3
NTK 1120	PC Operating Systems Essentials (B Term)	3
MTH 1060	Business Mathematics	3
ENG 1111	English I	3
FYE 1101	College Success	1
- -	Art/Humanities Elective*	3
<b>Spring</b>		
NTK 1211	Fundamentals of Networking (A Term)	3
CSE 1110	Introduction to Cybersecurity (A Term)	3
CSE 1120	Cybersecurity - Security + (B Term)	3
COM 1120	Public Speaking I	3
- -	Social/Behavioral Science Elective (GA) *	3
<b>Fall</b>		
NTK 2105	Cisco Certified Network Associate I (A Term)	3
NTK 2220	Microsoft Client Administration (A Term)	3
NTK 2222	Administering Microsoft Server (B Term)	3
ENG 2211	Business Communication	3
- -	ITS Electives**	3
<b>Spring</b>		
NTK 2212	Linux Server Administration or Co-op Electives (B Term)	3
MGT 2000	Introduction to Project Management	3
- -	CSE, NTK, CSD, ITS, or EBE (Co-op) Electives**	9
Total Credit Hours		61

\* At least one social/behavioral science or arts/humanities elective must be a global awareness (GA) course.

\*\* A minimum of twelve hours of technical electives must be taken. They may not include ITS 0700, ITS 0710, ITS 1205, ITS 1300. Three hours may come from EBE 1000, EBE 2702 classes.

The program schedule that follows is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations.

Many individuals, especially part-time students, and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Computer Software Development

Information technology is one of the fastest-growing career fields today. The Computer Software Development curriculum focuses on programming, database, and web design. Students learn to analyze, design, and develop solutions to business problems through the use of technology.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

Most courses in the curriculum are available online or in hybrid format (part online, part classroom). The Advanced Topics course currently requires class attendance. Some courses may be available at only one location (Springfield or Beavercreek). Some courses are offered only once a year. Contact your academic advisor about course sequencing. Graduating Computer Software Development students wishing to further build their skills could also receive an Associate of Applied Business in New Media by completing an additional 10 courses in the New Media curriculum.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Computer Software Development, a graduate will be able to do the following:

- Analyze information system requirements and design appropriate software solutions
- Write computer programs to implement information system designs.
- Develop database systems to meet business data requirements
- Design and create websites.
- Find and correct errors in the design and implementation of software solutions

### Scholastic Preparation

Computer Software Development students need a high school algebra background equivalent to MTH 0750 Algebra for STEM majors. Students with little or no computer background should enroll in ITS 0700 Computer Fundamentals as a preparatory course before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 Beginning Keyboarding or ITS 1205 Computer Concepts.

### Transfer Options

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
CSD 1510	Programming Fundamentals with Python *	3
ENG 1111	English I	3
FYE 1101	College Success *	1
ITS 1105	Computer Concepts and Software Applications *	3
ITS 1205	Windows Concepts **	1
ITS 1300	Introduction to Computers and Networks	2
ITS 1500	HTML and CSS	3
<b>Spring</b>		
CSD 1300	Database Management	2
CSD 1310	SQL I	2
CSD 1600	JavaScript and jQuery	3
COM 1120	Public Speaking I	3
MGT 1115	Customer Relations	2
MTH 1060	Business Mathematics	or
STT 2640	Elementary Statistics I	3
<b>Fall</b>		
CSD 2100	Systems Analysis and Design	3
CSD 2310	SQL II	2
CSD 2521	Java Programming I	3
PSY 1111	Introduction to Psychology	or
SOC 1110	Introduction to Sociology	3
- -	Technical Elective**	3
<b>Spring</b>		
CSD 2522	Java Programming II	3
CSD 2541	C++ Programming	3
CSD 2800	Advanced Topics or Co-Op/Internship***	3
ENG 2211	Business Communication ***	or
ENG 2230	Technical Report Writing ****	3
- -	Arts/Humanities Elective	3
	Total Credit Hours	60

^Proficiency test available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\* Technical electives must total 3 semester hours. They may come from any combination of courses (including online courses) not already prescribed that use the following course codes: CSD, CSE, GST, NWM, NTK, or GEO 1000

\*\*\* The co-op or internship consists of EBE 1000 and EBE 2702. EBE 1000 must be completed at least one term before EBE 2702.

The program schedule that follows is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional terms of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Computer Software Development - Cybersecurity Option

Information technology is one of the fastest-growing career fields today. The Computer Software Development curriculum focuses on programming, database, and web design as it relates to cybersecurity. Students learn to analyze, design, and develop solutions to business problems through the use of technology.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if this certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

Most courses in the curriculum are available online or in hybrid format (part online, part classroom). The Advanced Topics course currently requires class attendance. Some courses may be available at only one location (Springfield or Beavercreek). Some courses are offered only once a year. Contact your academic advisor about course sequencing.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Computer Software Development, a graduate will be able to do the following:

- Analyze information system requirements and design appropriate software solutions
- Write computer programs to implement information system designs.
- Develop database systems to meet business data requirements
- Design and create websites.
- Find and correct errors in the design and implementation of software solutions
- Demonstrate knowledge of computer and network security terms and concepts.

### Scholastic Preparation

Computer Software Development students need a high school algebra background equivalent to MTH 0650 Algebra for Non-STEM majors. Students with little or no computer background should enroll in ITS 0700 Computer Fundamentals, as a preparatory course before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 Beginning Keyboarding or ITS 1210 Keyboarding/Word Processing.

### Transfer Options

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
CSD 1510	Programming Fundamentals with Python *	3
ENG 1111	English I	3
FYE 1101	College Success *	1
ITS 1105	Computer Concepts and Software Applications ^*	3
ITS 1205	Windows Concepts ^*	1
ITS 1300	Introduction to Computers and Networks	2
ITS 1500	HTML and CSS	3
<b>Spring</b>		
CSD 1300	Database Management	2
CSD 1310	SQL I	2
CSD 1600	JavaScript and jQuery	3
CSE 1110	Introduction to Cybersecurity A term	3
CSE 1120	Cybersecurity - Security + B term	3
MTH 1060	Business Mathematics ^	or
STT 2640	Elementary Statistics I ^	3
<b>Fall</b>		
CSD 2521	Java Programming I	3
CSE 2261	Certified Ethical Hacking A term	3
CSE 2262	Cybersecurity Defense Analysis B term	3
COM 1120	Public Speaking I	3
ENG 2211	Business Communication **	or
ENG 2230	Technical Report Writing **	3
<b>Spring</b>		
CSD 2541	C++ Programming	3
CSD 2522	Java Programming II	3
CSD 2550	Secure Coding	3
PSY 1111	Introduction to Psychology	or
SOC 1110	Introduction to Sociology	3
- -	Art & Humanities Elective	3
	Total Credit Hours	62

^Proficiency test available.

\* Students with little or no computer background should enroll in ITS 0800 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0810 before taking a computer class.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional terms of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Computer Software Development - Web Development Option

Information technology is one of the fastest-growing career fields today. The Computer Software Development curriculum focuses on programming, database, and web design. Students learn to analyze, design, and develop solutions to business problems through the use of technology.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if this certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

Most courses in the curriculum are available online or in hybrid format (part online, part classroom). The Advanced Topics course currently requires class attendance. Some courses may be available at only one location (Springfield or Beavercreek). Some courses are offered only once a year. Contact your academic advisor about course sequencing. Graduating Computer Software Development students wishing to further build their skills could also receive an Associate of Applied Business in the New Media Web Design Option by completing an additional 3 courses in the New Media curriculum.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Computer Software Development - Web Development Option, a graduate will be able to do the following:

- Analyze information system requirements and design appropriate software solutions
- Write computer programs to implement information system designs.
- Develop database systems to meet business data requirements
- Design and create websites.
- Find and correct errors in the design and implementation of software solutions
- Utilize industry standard software effectively as a digital media editor.

### Scholastic Preparation

Computer Software Development students need a high school algebra background equivalent to MTH 0650 Algebra for Non-STEM majors. Students with little or no computer background should enroll in ITS 0700 Computer Fundamentals as a preparatory course before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 Beginning Keyboarding or ITS 1210 Keyboarding/Word Processing.

### Transfer Options

Students who wish to continue with their education can apply for the Bachelor of Applied Science in Web Design and Development at Clark State. See the Bachelor's Degree section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
CSD 1510	Programming Fundamentals with Python *	3
ENG 1111	English I	3
FYE 1101	College Success *	1
ITS 1105	Computer Concepts and Software Applications ^*	3
ITS 1205	Windows Concepts ^*	1
ITS 1300	Introduction to Computers and Networks	2
ITS 1500	HTML and CSS	3
<b>Spring</b>		
CSD 1300	Database Management	2
CSD 1310	SQL I	2
CSD 1600	JavaScript and jQuery	3
NWM 1005	Digital Aesthetics and User Experience	3
NWM 1020	Adobe for Web Professionals	3
NWM 1610	Web Design	3
<b>Fall</b>		
CSD 2310	SQL II	2
CSD 2521	Java Programming I	3
CSD 2100	Systems Analysis and Design	3
NWM 2400	Advanced Web Design	3
COM 1120	Public Speaking I	3
<b>Spring</b>		
CSD 2522	Java Programming II	3
CSD 2800	Advanced Topics	3
ART 1002	Art History II	3
PSY 1111	Introduction to Psychology	or
SOC 1110	Introduction to Sociology	3
STT 2640	Elementary Statistics I	3
	Total Credit Hours	61

^Proficiency test available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional terms of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Cybersecurity

Information Technology is one of the fastest-growing career fields today. The Cybersecurity curriculum prepares students to support information security needs of businesses. This curriculum can assist students in preparing for the following certifications: CompTIA (A+, Network+, Linux+, Security+, CySA+) AWS, CEH, CCNA. Cybersecurity students can increase their learning (and earning) potential by participating in the cooperative education work-experience program. Through this program, students can spend up to two semesters working in the information technology field while earning college credits. Interested students should contact their academic advisor or the Office of Career Management for more information. Learn more through the Center for Cybersecurity Education.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

This program is available during the day and evening. Contact your academic advisor about an evening curriculum guide. The Cybersecurity degree program may be completed entirely online.

### Learning Outcomes

- Demonstrate knowledge of computer and network systems terms and concepts.
- Set up, install, configure, and troubleshoot hardware/software for desktop computer systems.
- Install, configure, manage, and maintain network-based voice, audio, and video technologies.
- Install, configure, manage, and maintain network infrastructure equipment and software.
- Implement, configure, and troubleshoot network security software and hardware.
- Design secure computer and network infrastructures.

### Scholastic Preparation

Students should possess mathematical skills and should be comfortable using technology. Students who do not possess basic computer and technology skills should take one or more of the following courses to improve their skill level in basic technology use: ITS 0700, ITS 0710, ITS 1105, ITS 1210. Students who have not completed a full sequence of high school mathematics may need to complete a series of college preparatory math classes.

### Transfer Options

Students enrolled in applied associate degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges and universities have designed bachelor's completion programs for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 1110	PC Hardware Essentials ^	3
NTK 1120	PC Operating Systems Essentials ^	3
MTH 1060	Business Mathematics ^	3
ENG 1111	English I	3
FYE 1101	College Success	1
- -	Arts/Humanities Elective*	3
<b>Spring</b>		
CSE 1110	Introduction to Cybersecurity	3
CSE 1120	Cybersecurity - Security +	3
NTK 1211	Fundamentals of Networking	3
COM 1120	Public Speaking I	3
- -	Social/Behavioral Science Elective (GA)*	3
<b>Fall</b>		
CSE 2261	Certified Ethical Hacking (A Term)	3
CSE 2262	Cybersecurity Defense Analysis (B Term)	3
NTK 2105	Cisco Certified Network Associate I (A Term)	3
NTK 2115	Cisco Certified Network Associate II (B Term)	3
ENG 2211	Business Communication	3
<b>Spring</b>		
NTK 2125	Cisco Certified Network Associate III (A Term)	3
NTK 2150	Cloud Technologies (B Term)	3
NTK 2890	Computer Networking Capstone or Co-Op Electives**	3
CSD 1510	Programming Fundamentals with Python	3
MGT 2000	Introduction to Project Management	3
	Total Credit Hours	61

^ Proficiency test available.

\* At least one Social/Behavioral Science or Arts/Humanities elective must be a global awareness (GA) course.

\*\* At least 3 hours of technical electives must be taken from any NTK, CSD, or EBE (except EBE 1100) course not already prescribed. The EBE courses consist of Employability Skills and co-op/internship opportunities.

## GIS/Geospatial Technology

According to the U.S. Bureau of Labor Statistics, jobs for individuals with geospatial technology skills continues to grow 10 to 20 percent into the next decades. It is a high-technology field with the significant job growth occurring in both the public and private sectors. Clark State's GIS/Geospatial Technology program provides students with a unique combination of theory, analytical techniques, and computer skills to enable them to work effectively and independently in various geospatial technology fields including but not limited to the defense industry, urban planning, engineering, municipal management, business, and environmental studies. The curriculum is built around GIS, or Geographic Information Systems, and prepares them to display data through maps and charts, acquire and analyze spatial data, and collect and interpret remotely sensed images of our landscape. The program is enhanced with course options in unmanned aerial systems (UAS), or drones.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Geospatial Technology, a graduate will be able to:

- Acquire geospatial information from a variety of sources
- Use, combine, and manage geospatial data for a given purpose
- Interpret and analyze geospatial information
- Use geographic information system software for storage, manipulation, and analysis of geospatial data

### Scholastic Preparation

Students should possess mathematical, analytical, and spatial reasoning skills and should be comfortable using technology. Students who have not completed a full sequence of high school mathematics will need to complete a series of college preparatory math classes.

### Transfer Options

Students enrolled in applied associate degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
GEO 1000	Introduction to Cartography with GIS	3
GEO 1100	Human Geography	3
EBE 1000	Employability Skills	1
ENG 1111	English I	3
FYE 1101	College Success	1
ITS 1105	Computer Concepts and Software Applications	3



### Spring

GST 1400	Mapping and Georeferencing with GIS	3
GST 1500	Remote Sensing	3
GEO 1400	Introduction to Physical Geography	3
CSD 1300	Database Management	2
CSD 1310	SQL I	2
STT 2640	Elementary Statistics I	3

### Summer

EBE 2702	Co-op Education I	2
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### Fall

GST 1300	Introduction to UAS	3
GST 2100	Intermediate GIS Analysis and Data Management	3
CSD 1510	Programming Fundamentals with Python	3
ENG 2211	Business Communication	3
BIO 1420	Global Biology	4

### Spring

GST 2700	Advanced Topics in Geospatial Technology and GIS	4
GEO 2200	World Regional Geography	3
MGT 2000	Introduction to Project Management	3
CAD 1101	Computer-Aided Design I	or
GST 1350	UAS Operations, Planning, and Piloting	3
Total Credit Hours		61

\* Students with little or no computer background should enroll in ITS 0800 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0810 before taking a computer class.

\*\* GST electives must total a minimum of 3 semester hours and may come from any GST, CSD, or ATI course not already prescribed or CAD 1102 or any physics course at the PHY 1100 level or higher. BIO 1420 - Global Biology and GEO 1100 - World Human Geography are recommended electives.

\*\*\* This is a suggested Humanities/Social Social Science elective.

\*\*\*\* This is a suggested Natural/Physical Science elective. The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisor for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## COMPUTER AND INFORMATION TECHNOLOGY CERTIFICATES

### Computer Programming Departmental Certificate

This certificate provides the knowledge and skills necessary to design and develop computer software applications.

#### Learning Outcomes

Upon completion of the Computer Programming departmental certificate, a graduate will be able to:

- Write computer programs to implement information system designs
- Find and correct errors in the design and implementation of software solutions

Course #	Course Title	Credit Hours
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#### Fall

CSD 1510	Programming Fundamentals with Python	3
ITS 1500	HTML and CSS	3

#### Spring

CSD 1600	JavaScript and jQuery	3
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#### Fall

CSD 2521	Java Programming I	3
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#### Spring

CSD 2522	Java Programming II	3
CSD 2541	C++ Programming	3
CSD 2550	Secure Coding	3
Total Credit Hours		21

## Cyber-Networking Technical Certificate

This certificate includes curriculum designed to align with foundational industry recognized certifications in Cybersecurity and Computer Networking, along with additional courses to further support these technical skills and knowledge. Specifically, this certificate aligns with the CompTIA A+, CompTIA Security+, and CompTIA Network+ certifications. The certifications are not included in this curriculum, so students completing these courses must pursue the certification exams separately. The A+ certification (Core 1 and Core 2) emphasize the technologies and skills IT pros need to support a hybrid workforce:

- Increased reliance on SaaS applications for remote work
- How to remotely diagnose and correct common software, hardware or connectivity problems
- Evolving core technologies from cloud virtualization and IoT device security to data management and scripting
- Multiple operating systems, when to use them and how to keep them running properly
- Reflects the changing nature of the job, including how to assess if it's best to fix something on site, or send it to a specialized provider
- The Security+ certification verifies that the successful candidate has the knowledge and skills required to:
- Assess the security posture of an enterprise environment and recommend and implement appropriate security solutions.
- Monitor and secure hybrid environments, including cloud, mobile, Internet of Things (IoT), and operational technology.
- Operate with an awareness of applicable regulations and policies, including principles of governance, risk, and compliance.
- Identify, analyze, and respond to security events and incidents.
- The Network+ certification verifies that the successful candidate has the knowledge and skills required to:
- Establish network connectivity by deploying wired and wireless devices.
- Understand and maintain network documentation.
- Understand the purpose of network services.
- Understand basic datacenter, cloud and virtual networking concepts.
- Monitor network activity, identifying performance and availability issues.
- Implement network hardening techniques.
- Manage, configure, and troubleshoot network infrastructure.

### Learning Outcomes

- Demonstrate knowledge of computer and network systems terms and concepts.
- Install, manage, and configure network operating systems.
- Install, configure, manage, and maintain network-based voice, audio, and video technologies.

- Demonstrate knowledge of computer and network security terms and concepts.
- Implement, configure, and troubleshoot network security software.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 1110	PC Hardware Essentials	3
NTK 1120	PC Operating Systems Essentials	3
MTH 1060	Business Mathematics	3
ENG 1111	English I	3
FYE 1101	College Success	1
- -	Arts/Humanities Elective*	3
<b>Spring</b>		
CSE 1110	Introduction to Cybersecurity	3
CSE 1120	Cybersecurity - Security +	3
NTK 1211	Fundamentals of Networking	3
COM 1120	Public Speaking I	3
- -	Social/Behavioral Science Elective (GA)*	3
Total Credit Hours		31

## Cybersecurity Foundations Short-Term Technical Certificate

This certificate aligns with the CompTIA Security+ certification. The certification is not included in this curriculum, so students completing these courses must pursue the CompTIA Security+ certification exam separately. The Security+ exam verifies you have the knowledge and skills required to:

- Assess the security posture of an enterprise environment and recommend and implement appropriate security solutions.
- Monitor and secure hybrid environments, including cloud, mobile, Internet of Things (IoT), and operational technology.
- Operate with an awareness of applicable regulations and policies, including principles of governance, risk, and compliance.
- Identify, analyze, and respond to security events and incidents.

### Learning Outcomes

- Demonstrate knowledge of computer and network security terms and concepts.
- Implement, configure, and troubleshoot network security software.

Course #	Course Title	Credit Hours
CSE 1120	Cybersecurity - Security +	3
	Total Credit Hours	3

## Cybersecurity Short-Term Technical Certificate

This certificate is focused on providing the knowledge and skills necessary to design, implement, manage, and maintain computer and network-based security technologies.

### Learning Outcomes

Upon completion of the CyberSecurity short-term technical certificate, a graduate will be able to:

- Demonstrate knowledge of computer and network systems terms and concepts.
- Set up, install, configure, and troubleshoot hardware/software for desktop computer systems.
- Demonstrate knowledge of computer and network security terms and concepts.
- Implement, configure, and troubleshoot network security software and hardware.
- Implement, configure, and troubleshoot network security equipment.
- Design secure computer and network infrastructures.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 1110	PC Hardware Essentials	3
NTK 1120	PC Operating Systems Essentials	3
<b>Spring</b>		
CSE 1110	Introduction to Cybersecurity	3
CSE 1120	Cybersecurity - Security +	3
<b>Fall</b>		
CSE 2261	Certified Ethical Hacking	3
CSE 2262	Cybersecurity Defense Analysis	3
<b>Spring</b>		
NTK 1211	Fundamentals of Networking	3
	Total Credit Hours	21

## Geospatial Precision Agriculture Specialist Short-Term Technical Certificate

Geospatial Technology has been identified by the U.S. Bureau of Labor as an emerging industry. In addition, agricultural sales and service companies are hiring people who have completed coursework in both agriculture and geospatial technologies to develop precision agriculture programs or to provide technical assistance to farmers. With this in mind, the Geospatial Precision Agriculture Specialist certificate is designed to provide the technical background necessary to begin a successful career as a GIS precision agriculture specialist.

Students enrolled in the Geospatial Precision Agriculture Specialist certificate usually have an associate's or bachelor's degree. However, coursework included in a certificate program may ultimately be applied for the associate degree in the related technology program.

### Degree Availability

AGR 1750 and AGR 2750 are only offered in Springfield. All other courses can be taken in Springfield or in Beaver Creek.

### Learning Outcomes

Upon completion of the Geospatial Precision Agriculture Specialist short-term technical certificate, a graduate will be able to:

- Skills needed to use, manage, and manipulate GIS applications
- Hands-on experience using GIS software
- Knowledge of fundamental concepts and issues related to precision agriculture
- Skills necessary to conduct precision agricultural analysis

Course #	Course Title	Credit Hours
<b>Fall</b>		
GEO 1000	Introduction to Cartography with GIS	3
ITS 1105	Computer Concepts and Software Applications	3
<b>Spring</b>		
GST 1500	Remote Sensing	3
AGR 1750	Precision Agriculture	3
<b>Fall</b>		
GST 1300	Introduction to UAS	3
AGR 2750	Applied GIS for Agriculture	4
MGT 2450	Data Analytics	3
	Total Credit Hours	22

## GIS Analyst Short-Term Technical Certificate

Geographic Information Systems (GIS) has been identified by the U.S. Bureau of Labor as an emerging industry. With this in mind, the GIS Analyst certificate is designed to provide the technical background necessary to begin a successful career as a GIS analyst.

This certificate is designed for those students who seek to enhance their job-related skills in becoming a GIS analyst. This certificate is two years in length due to the sequence of prerequisites and the terms in which courses are offered.

Students enrolled in the GIS Analyst certificate usually have an associate or bachelor's degree. However, coursework included in a certificate program may ultimately be applied for the associate degree in the related technology program.

### Learning Outcomes

Upon completion of an the GIS Analyst short-term technical certificate, a graduate will be able to:

- Skills needed to use and manage GIS applications
- Hands-on experience using GIS software
- Knowledge of fundamental concepts and issues related to GIS
- Skills necessary to conduct spatial analysis

Course #	Course Title	Credit Hours
<b>Fall</b>		
GEO 1000	Introduction to Cartography with GIS	3
ITS 1105	Computer Concepts and Software Applications	3
<b>Spring</b>		
GST 1400	Mapping and Georeferencing with GIS	3
STT 2640	Elementary Statistics I	3
<b>Fall</b>		
GST 2100	Intermediate GIS Analysis and Data Management	3
CSD 1300	Database Management	2
CSD 1310	SQL I	2
<b>Spring</b>		
GST 2700	Advanced Topics in Geospatial Technology and GIS	4
MGT 2000	Introduction to Project Management	3
	Total Credit Hours	26

## GIS Image Analyst Short-Term Technical Certificate

Geographic Information Systems (GIS) has been identified by the U.S. Bureau of Labor as an emerging industry. With this in mind, the GIS Image Analyst certificate is designed to provide the technical background necessary to begin a successful career as an image analyst.

This certificate is designed for those students who seek to enhance their job-related skills in becoming a GIS image analyst. This certificate is two years in length due to the sequence of prerequisites and the terms in which courses are offered.

Students enrolled in the GIS Image analyst short-term technical certificate usually have an associate or bachelor's degree. However, coursework included in a certificate program may ultimately be applied for the associate degree in the related technology program.

### Learning Outcomes

Upon completion of the GIS Image Analyst short-term technical certificate, a graduate will be able to:

- Skills needed to use and manage GIS applications
- Hands-on experience using GIS software
- Knowledge of fundamental concepts and issues related to GIS
- Skills necessary to analyze imagery

Course #	Course Title	Credit Hours
<b>Fall</b>		
GEO 1000	Introduction to Cartography with GIS	3
GST 1300	Introduction to UAS	3
ITS 1105	Computer Concepts and Software Applications	3
<b>Spring</b>		
GST 1400	Mapping and Georeferencing with GIS	3
GST 1500	Remote Sensing	3
STT 2640	Elementary Statistics I	3
<b>Fall</b>		
GST 2100	Intermediate GIS Analysis and Data Management	3
CSD 1300	Database Management	2
CSD 1310	SQL I	2
	Total Credit Hours	25

## GIS Programming Certificate

Geographic Information Systems (GIS) has been identified by the U.S. Bureau of Labor as an emerging industry. With this in mind, the GIS Programming certificate is designed to provide the technical background necessary to begin a successful career as a GIS programmer.

This certificate is designed for those students who seek to enhance their job-related skills in becoming a GIS Programmer. This certificate is two years in length due to the sequence of prerequisites and the terms in which courses are offered.

Students enrolled in the GIS Programmer certificate usually have an associate or bachelor's degree. However, coursework included in a certificate program may ultimately be applied for the associate degree in the related technology program.

### Learning Outcomes

Upon completion of the GIS Programming certificate, a graduate will be able to:

- Skills needed to use, manage, and manipulate GIS applications
- Hands-on experience using GIS software
- Knowledge of fundamental concepts and issues related to programming
- Skills necessary to program in a variety of appropriate GIS languages

Course #	Course Title	Credit Hours
<b>Fall</b>		
GEO 1000	Introduction to Cartography with GIS	3
ITS 1105	Computer Concepts and Software Applications	3
<b>Spring</b>		
GST 1400	Mapping and Georeferencing with GIS	3
STT 2640	Elementary Statistics I	3
<b>Fall</b>		
GST 2100	Intermediate GIS Analysis and Data Management	3
CSD 1510	Programming Fundamentals with Python	3
CSD 1300	Database Management	2
CSD 1310	SQL I	2
<b>Spring</b>		
CSD 2100	Systems Analysis and Design	3
CSD 2531	C# Programming	or
CSD 2541	C++ Programming	3
	Total Credit Hours	28



## Network Administration Short-Term Technical Certificate

This certificate is focused on providing the knowledge and skills necessary to install, configure, and administer a variety of network operating systems and services.

### Learning Outcomes

Upon completion of the Network Administration short-term technical certificate, a graduate will be able to:

- Demonstrate knowledge of computer and network systems terms and concepts.
- Setup, install, configure, and troubleshoot hardware/software for desktop computer systems.
- Install, configure, manage, maintain, and troubleshoot server computer systems.
- Install, configure, manage, and maintain network-based voice, audio, and video technologies.
- Demonstrate knowledge of computer and network security terms and concepts.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 1110	PC Hardware Essentials	3
NTK 1120	PC Operating Systems Essentials	3
<b>Spring</b>		
NTK 1211	Fundamentals of Networking	3
CSE 1110	Introduction to Cybersecurity	3
<b>Fall</b>		
NTK 2220	Microsoft Client Administration	3
NTK 2222	Administering Microsoft Server	3
<b>Spring</b>		
NTK 2212	Linux Server Administration	3
Total Credit Hours		21

## Network Administrator Short-Term Technical Certificate

This certificate aligns with the Cisco Certified Network Associate (CCNA) certification. The certification is not included in this curriculum, so students completing these courses must pursue the certification exams separately. The Security+ exam verifies you have the knowledge and skills required to:

- Showcase your knowledge of networking equipment and configuration.
- Be able to troubleshoot connectivity issues and effectively manage networks.
- Demonstrate your ability to configure routing for different IP versions and describe the purpose of redundancy protocols.
- Be able to interpret the components of a routing table.
- Understand threats and ways to prevent them.
- Identify key elements of a security program, like user awareness and training.
- Demonstrate practical skills like setting up secure access to devices and networks.
- Understand how automation affects network management, and compare traditional networks with controller-based networking.
- Leverage APIs, and understand configuration management tools.

### Learning Outcomes

- Install, configure, manage, and maintain network infrastructure equipment and software.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 2105	Cisco Certified Network Associate I	3
NTK 2115	Cisco Certified Network Associate II	3
<b>Spring</b>		
NTK 2125	Cisco Certified Network Associate III	3
Total Credit Hours		9

## Network Foundations Short-Term Technical Certificate

This certificate aligns with the CompTIA A+ certification. The certification is not included in this curriculum, so students completing these courses must pursue the CompTIA A+ certification exams separately. The CompTIA A+ Core Series requires candidates to pass two exams: Core 1 (220-1101) and Core 2 (220-1102) covering the following content, emphasizing the technologies and skills IT pros need to support a hybrid workforce:

- Increased reliance on SaaS applications for remote work
- How to remotely diagnose and correct common software, hardware or connectivity problems
- Evolving core technologies from cloud virtualization and IoT device security to data management and scripting
- Multiple operating systems, when to use them and how to keep them running properly
- Reflects the changing nature of the job, including how to assess if it's best to fix something on site, or send it to a specialized provider

### Learning Outcomes

- Demonstrate knowledge of computer terms and concepts.
- Install, manage, and configure network operating systems.

Course #	Course Title	Credit Hours
NTK 1110	PC Hardware Essentials	3
NTK 1120	PC Operating Systems Essentials	3
	Total Credit Hours	6

## Network Infrastructure Short-Term Technical Certificate

This certificate is focused on providing the knowledge and skills necessary to design, configure, install, and manage a computer network infrastructure.

### Learning Outcomes

Upon completion of the Network Infrastructure short-term technical certificate, a graduate will be able to:

- Demonstrate knowledge of computer and network systems terms and concepts.
- Setup, install, configure, and troubleshoot hardware/software for desktop computer systems.
- Install, configure, manage, maintain, and troubleshoot server computer systems.
- Install, configure, manage, and maintain network-based voice, audio, and video technologies.
- Demonstrate knowledge of computer and network security terms and concepts.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 1110	PC Hardware Essentials	3
NTK 1120	PC Operating Systems Essentials	3
<b>Spring</b>		
NTK 1211	Fundamentals of Networking	3
<b>Fall</b>		
NTK 2105	Cisco Certified Network Associate I (A Term)	3
NTK 2115	Cisco Certified Network Associate II (B Term)	3
<b>Spring</b>		
NTK 2125	Cisco Certified Network Associate III (A Term)	3
NTK 2150	Cloud Technologies (B Term)	3
	Total Credit Hours	21

## Network Support Short-Term Technical Certificate

This certificate builds upon the Network Foundations Certificate (CompTIA A+) with curriculum aligning with the CompTIA Network+ certification. The certifications are not included in this curriculum, so students completing these courses must pursue the certification exams separately.

The A+ certification (Core 1 and Core 2) emphasize the technologies and skills IT pros need to support a hybrid workforce:

- Increased reliance on SaaS applications for remote work
- How to remotely diagnose and correct common software, hardware or connectivity problems
- Evolving core technologies from cloud virtualization and IoT device security to data management and scripting
- Multiple operating systems, when to use them and how to keep them running properly
- Reflects the changing nature of the job, including how to assess if it's best to fix something on site, or send it to a specialized provider
- The Network+ certification verifies that the successful candidate has the knowledge and skills required to:
- Establish network connectivity by deploying wired and wireless devices.
- Understand and maintain network documentation.
- Understand the purpose of network services.
- Understand basic datacenter, cloud and virtual networking concepts.
- Monitor network activity, identifying performance and availability issues.
- Implement network hardening techniques.
- Manage, configure, and troubleshoot network infrastructure.

### Learning Outcomes

- Demonstrate knowledge of computer terms and concepts.
- Install, manage, and configure network operating systems.
- Install, configure, manage, and maintain network-based voice, audio, and video technologies.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 1110	PC Hardware Essentials	3
NTK 1120	PC Operating Systems Essentials	3
<b>Spring</b>		
NTK 1211	Fundamentals of Networking	3
	Total Credit Hours	9

## Technical Support Short-Term Technical Certificate

This certificate is focused on providing the knowledge and skills necessary to support computer and network end-users and support desktop application software.

### Learning Outcomes

Upon completion of the Technical Support short-term technical certificate, a graduate will be able to:

- Demonstrate knowledge of computer and network systems terms and concepts.
- Setup, install, configure, and troubleshoot hardware/software for desktop computer systems.
- Install, configure, manage, and maintain network-based voice, audio, and video technologies.
- Use and troubleshoot basic application software.

Course #	Course Title	Credit Hours
<b>Fall</b>		
NTK 1110	PC Hardware Essentials	3
NTK 1120	PC Operating Systems Essentials	3
- -	ITS Electives*	4
<b>Spring</b>		
NTK 1211	Fundamentals of Networking	3
CSE 1110	Introduction to Cybersecurity	3
CSE 1120	Cybersecurity - Security +	3
ITS 1238	Intermediate Spreadsheet	2
	Total Credit Hours	21

\*Students may take 4 credits from subject code ITS except ITS 0800 and ITS 0810.

## UAS Operations and GIS Image Analysis Short-Term Technical Certificate

Unmanned Aerial Systems (UAS) along with Geographic Information Systems (GIS) have been identified by the U.S. Bureau of Labor as high growth industries. With this in mind, the UAS Operations Plus GIS Certificate is designed to provide the technical background necessary to begin a successful career in UAS operations and data handling. This certificate is designed for those students who seek to enhance their job-related skills in becoming a UAV operator with the ability to manage and analyze data products. This certificate is one year in length in order to develop foundational skills and knowledge necessary for the workforce.

Students enrolled in the UAS Operations Plus GIS certificate may already have an Associates or Bachelor's degree; however, this program is also an entryway for more traditional college-age students. Coursework included in a certificate program may ultimately be applied for the associate degree in the related technology program, GIS/Geospatial Technology. Down the curriculum sheet for this major.

### Learning Outcomes

- Skills needed to use, manage, and manipulate GIS applications
- Hands-on experience using GIS software
- Knowledge of fundamental concepts and issues related to GIS
- Skills necessary to analyze imagery
- Hands-on experience using Unmanned Aerial Vehicles (UAV)

Course #	Course Title	Credit Hours
<b>Fall</b>		
GEO 1000	Introduction to Cartography with GIS	3
GST 1300	Introduction to UAS	3
ITS 1105	Computer Concepts and Software Applications	3
<b>Spring</b>		
GST 1350	UAS Operations, Planning, and Piloting	3
GST 1400	Mapping and Georeferencing with GIS	3
GST 1500	Remote Sensing	3
	Total Credit Hours	18

## Web Development Departmental Certificate

The focus of this certificate is to provide the knowledge and skills necessary to develop web applications and e-business systems.

### Learning Outcomes

Upon completion of the Web Development departmental certificate, a graduate will be able to:

- Design and create websites.
- Find and correct errors in the design and implementation of software solutions

Course #	Course Title	Credit Hours
<b>Fall</b>		
CSD 1510	Programming Fundamentals with Python	3
ITS 1105	Computer Concepts and Software Applications	3
ITS 1500	HTML and CSS	3
<b>Spring</b>		
CSD 1300	Database Management	2
CSD 1310	SQL I	2
CSD 1600	JavaScript and jQuery	3
<b>Fall</b>		
CSD 2310	SQL II	2
CSD 2521	Java Programming I	3
CSD 2100	Systems Analysis and Design	3
<b>Spring</b>		
CSD 2550	Secure Coding	3
CSD 2800	Advanced Topics	3
	Total Credit Hours	30

# EDUCATION

## Early Childhood Education

The Early Childhood Education (ECE) program prepares individuals for employment in licensed child care centers, nursery schools, hospitals, group homes, children's homes, and other programs concerned with the well-being, development, and education of the infant, toddler, preschool and school-aged child. Graduates of the Early Childhood Education degree program are prepared to work with young children, helping them develop into the whole, productive persons they are meant to be. Students receive a total of 300 clock hours of supervised experiences in approved early childhood education settings during Practicum I, and II, Curriculum & Instruction, Seminar II, and other courses with accompanying field experience requirements. These experiences provide students the opportunity to observe and complete student teaching with young children in authentic learning environments. In addition, courses provide students the opportunity to discuss their experiences and share ideas concerning curriculum planning and behavior management. All classes are web enhanced.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Early Childhood Education, a graduate will be able to:

- Demonstrate knowledge of child development and learning.
- Demonstrate knowledge of effective family and community relations.
- Demonstrate ability to observe, document, and assess young children and families.
- Demonstrate teaching and learning processes.
- Exhibit professional behaviors and attitude.
- Demonstrate proficiency in general education and supportive skills.
- Practice an appreciation and respect for diversity.

### Graduation Requirements

A grade of C or better in all ECE and EDU courses is required for graduation. Requests to repeat technical courses more than twice must be approved by the academic dean of Health, Human, and Public Services. Students will be billed for liability insurance for field experience courses while enrolled in the Early Childhood Education program.

### Transfer Options

Students enrolled in the Associate of Applied Science Early Childhood Education degree program are preparing for employment upon graduation. However, many of these students are also interested in completing a bachelor's degree in education that would allow them to teach in the primary grades. Opportunities for transfer to a variety of 4-year institutions exist for students completing an A.A.S. For more information, please visit the Transfer Guides page on our website.

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
ECE 1100	Socioemotional Development in Early Childhood	3
ECE 1103	Early Childhood Development	3
ECE 1105	Language and Literacy in Education	3
ECE 1200	Infant Toddler Curriculum	2
<b>Spring</b>		
ECE 1101	Professional Development for Educators	1
ECE 1106	Health, Safety and Nutrition	2
ECE 1112	Cognitive Development in Early Childhood	3
EDU 1110	Introduction to Education	3
COM 1120	Public Speaking I	3
<b>Summer</b>		
ENG 1112	English II	3
SOC 1110	Introduction to Sociology	3
- -	Science Elective*	3
- -	Math Elective**	3
<b>Fall</b>		
ECE 1108	Creative and Motor Development in Early Childhood	3
ECE 1116	Observation and Assessment in Early Childhood	3
ECE 2138	Curriculum and Practicum I	4
PSY 2218	Introduction to Educational Psychology	3
<b>Spring</b>		
ECE 2120	Leadership, Management, Mentoring in Early Childhood Education	3
ECE 2139	Curriculum and Practicum II	4
EDU 2110	Family, Community, Schools	3
EDU 2217	Individuals with Exceptionalities	3
Total Credit Hours		65

\*BIO 1410, Fundamentals of Biology, BIO 1105 Fundamentals of Anatomy and Physiology, GLG 1131, Physical Geology, GLG 1129, Survey of Earth Sciences (See list of others under Physical/Natural Sciences in front of catalog)

\*\*Choose any OT36 mathematics or statistics course



## Teacher Education Transfer

The Associate of Arts (AA) Teacher Education Transfer concentration is designed for students who plan to transfer into a Teacher Education program at a four-year college or university. It is not designed to prepare students for immediate employment in an educational setting upon graduation. This is a generalist preparation degree program for all students planning future K-12 licensure.

Students completing the curriculum will satisfy the AA degree requirements and many of the general education courses required for transfer to a four-year teacher preparation program. In addition, students will complete several courses that focus on the foundations of teaching and education.

Four-year colleges and universities generally require that students spend a significant portion of their first two years taking courses that build their knowledge and skills in general education. The AA degree focuses on courses in the liberal arts and sciences. Credit hours must come from areas in accordance with the AA degree requirements listed in the front of the catalog. The remaining credit hours are divided among the College Success course and specific education courses.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts in Teacher Education Transfer degree, a graduate will be able to:

- Write clearly.
- Think critically.
- Critically analyze a work of literature, music, theatre, art, or architecture.
- Analyze and evaluate issues of the human historical and philosophical experience.
- Describe and assess divergent aspects of individual and group human behavior.
- Demonstrate mathematical and computer literacy.
- Identify and apply the concepts of various aspects of the natural and physical world.
- Demonstrate knowledge of core educational concepts and strategies.

### Graduation Requirements

Teacher Education students need a college-preparatory high school background. Four years of each of the following content areas is strongly recommended: English, mathematics, science and social studies; foreign language is highly beneficial. Students with fewer classes in these areas may require college preparatory classes or additional coursework at Clark State.

### Transfer Options

Students seeking an Associate of Arts Education Transfer degree should plan the details of the program at Clark State according to the requirements of the individual transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult his/her academic advisor and the intended transfer

institution when planning a schedule of classes. In some instances, to prevent taking additional courses, the student may benefit by transferring to the University after one year at Clark State. For more information, please visit the Transfer Guides page on our website.

Course #	Course Title	Credit Hours
<b>Fall</b>		
EDU 1110	Introduction to Education *	3
ECE 1103	Early Childhood Development *	3
BIO 1410	Fundamentals of Biology	4
ENG 1111	English I	3
FYE 1101	College Success	1
PSY 1111	Introduction to Psychology (GA)	3
<b>Spring</b>		
ENG 1112	English II	3
EDU 2110	Family, Community, Schools	3
ART 1300	Appreciation of the Arts (GA)	or
THE 1130	Theatre Appreciation (GA)	3
- -	Natural Science Elective **	4
<b>Fall</b>		
PSY 2218	Introduction to Educational Psychology *	3
COM 1120	Public Speaking I	3
ENG 2300	Great Books: World Literature (GA)	3
HST -	History Elective***	3
PHL -	Philosophy Elective****	3
<b>Spring</b>		
SOC 1110	Introduction to Sociology	3
EDU 2217	Individuals with Exceptionalities *	3
- -	Math/Statistics Elective^	3
SOC 2220	Comparing Cultures (GA)	or
SOC 2240	Racial and Cultural Minorities (GA)	3
HST -	History Elective***	3
Total Credit Hours		60

\* Ohio TAG course. TAG courses are consistently transferable to other Ohio public colleges and normally will count toward the major at the transfer institution. Courses may also be used to fulfill additional general education requirements at the four-year institution as applicable.

\*\* Science courses should be selected from those listed under Natural & Physical Sciences in the OhioTransfer 36. Many options are available; choose one most suited to your transfer institution.

\*\*\* History courses should be selected from those listed under Arts and Humanities.

\*\*\*\* The Philosophy course should be selected from those listed under Arts and Humanities.

^ STT 2640 at Clark State or Math for Educators course at the transfer institution as outlined in the corresponding articulation agreement.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory requirements, will require additional semesters of study.

In recognition of the importance of global awareness, the College also requires that students receiving the Associate of Arts degree take at least four courses with significant international content. Courses in the curriculum plan above that meet this requirement are identified with the "GA" designation behind the course name.

## EDUCATION CERTIFICATES

### Child Development Associate Short-Term Technical Certificate

The Child Development Associate Short-Term Technical Certificate (CDA) is the first step toward working and teaching children birth through 5 years old. Students will complete four courses to ensure they acquire the understanding, content knowledge, and skill to teach young children. Students also complete observation hours in a designated focus area (infant/toddler or preschool).

The CDA allows students to transition easily into the Clark State Early Childhood Education program since the courses are embedded in the AAS in Early Childhood Education degree.

#### Certification

Students earn the CDA certification upon completion of required coursework, CDA portfolio and observation as per the counsel for professional recognition guidelines.

#### Learning Outcomes

- Demonstrate understanding of safe and healthy learning environments for children in order to prevent and reduce injuries.
- Understands a variety of developmentally appropriate teaching strategies promoting physical, cognitive, language, literacy and creative development of all children in their care.
- Explain how relationships with a child individually and in a group setting helps with individual identity, cultural identity, and social skills.
- Demonstrate understanding of strategies used to promote children's self-regulation.
- Demonstrates understanding of importance of family engagement with child and program.
- Explains how observation, documentation and planning to support children's development and learning is crucial to the program.
- Understands personal and professional growth benefits children, families and the program.

Course #	Course Title	Credit Hours
<b>Fall</b>		
ECE 1103	Early Childhood Development	3
<b>Spring</b>		
ECE 1106	Health, Safety and Nutrition	2
ECE 1116	Observation and Assessment in Early Childhood	3
	Total Credit Hours	8

## ENGINEERING, MANUFACTURING, AND MECHANICAL SERVICES

### Computer-Aided Design Technology

Students completing an Associate of Applied Science degree in Computer-Aided Design (CAD) Technology are qualified to play a support role to the engineering professions in industrial, research, and academic areas preparing drawings, blueprints, layouts, bills of materials, manufacturing, and product support documentation. Training in the area of advanced computer-aided drafting is also included.

In addition to applied technical courses, Computer-Aided Design (CAD) Technology includes a co-op experience. Students must complete EBE 1000, Employability Skills, and then work with the Office of Career Management to secure an appropriate co-op site.

#### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

#### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Computer-Aided Design (CAD) Technology, a graduate will be able to:

- Design a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Produce a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Document a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Analyze a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.

#### Scholastic Preparation

It is recommended students starting the program have one year each of high school algebra, trigonometry, and physics or the equivalents.

#### Transfer Options

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. Students who wish to continue with their education, can apply for the Bachelor of Applied Science in Manufacturing Technology Management offered at Clark State. See the Bachelor's Degree Section of the catalog for more information.

Course #	Course Title	Credit Hours
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### Fall

CAD 2100	Solid Modeling	3
CAD 2200	Advanced Solid Modeling	3
CAD 2300	Computer-Aided Manufacturing	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1

### Spring

CAD 1101	Computer-Aided Design I	3
CAD 1310	Residential Architecture and Design	3
CAD 2310	Introduction to Civil Engineering Technology	3
ENT 1000	Introduction to Industrial and Engineering Technology	3
MTH 1280	College Algebra	4

### Summer

- -	Co-op Education*	1
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### Fall

ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENT 2700	Engineering Technology Project	3
ENG 1111	English I	3
STT 2640	Elementary Statistics I	3

### Spring

ENT 2600	Engineering Design	3
ECO 1100	General Economics	3
ENG 2211	Business Communication	3
PHL 2100	Ethics	3
PHY 1100	Fundamentals of Physics	4
Total Credit Hours		63

\* The co-op must be a minimum of 1 semester hour in any combination of co-op (EBE 2701, EBE 2702, EBE 2703, EBE 2704).

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisor for help in planning their schedules.

## Diesel Technology Program

The diesel industry is growing and there is a current and future need for qualified technicians. Diesel engines are more powerful and durable than gas engines, making them a popular alternative in the trucking, busing, agriculture, and construction industries.

The Clark State Diesel Technology program is a comprehensive sequence of courses that combine theory and practical applications. Students learn theory, design, operation, diagnosis, repair and service of diesel engines, power train and chassis, hydraulic systems, and fuel injection systems. They develop communication and mathematical skills necessary for the diesel industry. The program includes 300 hours of on-the-job training in a co-op work experience. Students also start earning industry credentials such as Detroit Diesel Engine Platforms, Freightliner Certifications, ASE Entry Level Certifications, and International Harvester Credentials.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

This program is taught in a modern, clean training facility at the Ohio Hi-Point Career Center at 2280 State Route 540 in Bellefontaine, Ohio. Some general education courses may need to be completed online or at our Springfield location.

### Learning Outcomes

Upon successful completion of the Associate of Technical Studies in Diesel Technology, a graduate will be able to:

- Diagnose and repair medium and heavy- duty truck engines
- Diagnose and repair medium and heavy-duty truck suspension and steering systems
- Diagnose and repair medium and heavy-duty truck brake systems
- Diagnose and repair medium and heavy- duty truck electrical/electronic systems
- Perform preventative maintenance and inspections on medium and heavy-duty trucks
- Diagnose and repair medium and heavy- duty truck drivelines
- Diagnose and repair medium and heavy-duty truck heating, ventilation and air conditioning systems
- Diagnose and repair medium and heavy duty-truck fluid power systems

### Scholastic Preparation

Basic mechanical ability or previous mechanical work experience is helpful, but not required. Students with little or no computer background should enroll in ITS 0700, Computer Fundamentals, as a preparatory course before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 1205, Windows Concepts.

Diesel technicians perform complete engine overhauls, minor preventative maintenance services, and everything in between. Starting wages are usually in the \$13 to \$16 per hour range with increases going to \$30 per hour or more. Job opportunities are going unfilled in the Miami Valley and throughout Ohio and the country.

Course #	Course Title	Credit Hours
<b>Fall</b>		
DSL 1100	Hydraulic Theory and Operation	2
DSL 1200	Fundamentals of Engines	3
DSL 1300	Preventative Maintenance	2
ITS 1105	Computer Concepts and Software Applications	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1000	Introduction to Industrial and Engineering Technology	3
EBE 1000	Employability Skills	1
<b>Spring</b>		
DSL 1500	Heavy Truck Drive Trains	3
DSL 1550	Truck Steering and Suspension	2
DSL 1650	Truck Brake Systems	3
MGT 1100	Personal Finance	3
WLD 1000	Introduction to Welding Processes	3
EBE 2701	Co-op Education I	1
<b>Summer</b>		
MTH 1115	Industrial Calculations	3
<b>Fall</b>		
DSL 1600	Basic Electrical	3
DSL 2300	Advanced Electrical / Electronics	3
DSL 2500	Heavy Truck Automatic Transmissions	2
ENG 1111	English I	3
- -	Social/Behavioral Science	3
<b>Spring</b>		
DSL 2600	Heavy Truck HVAC	2
DSL 2710	Diesel Engine Performance	4
MGT 1115	Customer Relations	2
ENG 2211	Business Communication	3
EBE 2801	Co-op Education II	1
- -	Any HST course	3
	Total Credit Hours	62

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives is available in the College Catalog.

## Heating, Ventilation, Air Conditioning, and Refrigeration (Clark County CTC)

Students completing the Heating, Ventilating, Air Conditioning and Refrigeration Technology program are prepared to find employment with large commercial heating and air conditioning contractors, residential mechanical contractors, parts and equipment distributors, large commercial and industrial facility maintenance departments, hospital facilities maintenance departments, custom design or new construction markets. The associate degree program offers the training needed to develop a high degree of technical skill, as well as the ability to work with minimal supervision and a strong sense of personal responsibility.

This program is taught in Springfield at the Springfield-Clark Career Technology Center (CTC) (1901 Selma Road) near our Leffel Lane location. General education courses not offered at Springfield-Clark CTC may be completed online or at one of Clark State's locations in Springfield, Bellefontaine or Beavercreek.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an associate degree in Heating, Ventilating and Air Conditioning Technology, a graduate will be able to:

- Explain thermodynamics, heat, fluids, and pressures for refrigeration and EPA compliance.
- Prescribe the procedures for making electrical measurements.
- Diagnose and repair gas, electric, fuel oil furnaces and air conditioners - heat pump.
- Determine testing and analyzing instruments for troubleshooting and calculating the combustion process.

Course #	Course Title	Credit Hours
<b>Fall</b>		
EBE 1000	Employability Skills	1
ENG 1111	English I	3
FYE 1101	College Success	1
ITS 1105	Computer Concepts and Software Applications	3
MTH 1115	Industrial Calculations	3
- -	Arts/Humanities or Social/Behavioral Science Elective	3
<b>Spring</b>		
HVC 1015	HVAC-R Fundamentals and Practices	3
HVC 1100	Basic Electricity and Motors for HVAC-R	4
HVC 1215	EPA Certifications	2
HVC 1315	Commercial Refrigeration	2
INT 1000	OSHA 10-Hour General Safety	1
MGT 1060	Organizational Behavior	3

## Summer

HVC 2315	Air Conditioning	2
HVC 2415	Indoor Air Quality and Distribution	3
HVC 2700	HVAC-R Job Skills	2

## Fall

HVC 2010	Residential Gas Heating	4
HVC 2030	Heat Pump Systems	2
HVC 2040	Oil and Hydronic Heat	2
HVC 2220	Residential Electric Heating	1

## Spring

CAD 1101	Computer-Aided Design I	3
COM 1170	Small Group Communication	3
ECO 2210	Principles of Macroeconomics	or
ECO 2220	Principles of Microeconomics	3
ENG 2211	Business Communication	3
- -	Co-op or Technical Elective*	3
	Total Credit Hours	60

\*The technical electives must total a minimum of 3 semester hours in any combination of co-op (EBE 2701 - EBE 2704, EBE 2801 - EBE 2804) or any course not already prescribed in the following areas: CAD, ENT, INT, or NTK 1110.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

## Industrial Technology

The Industrial Technology program has been developed in response to the great need expressed by manufacturers in the Champaign, Clark, Greene and Logan County areas for skilled technicians. The program is intended to train for career fields such as machine repair technician, electrical maintenance technician, or industrial maintenance mechanic.

Technical coursework in the program is designed such that it can be used to support company-sponsored apprenticeship programs.

### Directed Learning Laboratory

Clark State has recognized the need for students who are currently working to have flexible class hours. As a result, many of the courses in the Industrial Technology program will be offered in the College's Directed Learning Laboratory. Most Industrial Technology (INT) courses, along with other selected technical courses, will be offered in a modular format that will allow students to come to the lab on their own schedule and complete the coursework and laboratory assignments. The lab will be staffed by a faculty member and is open day, evening, and Saturday hours to accommodate many working schedules. The days and times that students complete the coursework in the lab is up to the individual student within the open hours of the lab. The ability to learn on an independent basis will help ensure student success in this program.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Degree Availability

Some required courses for the Associates degree are offered only at the Springfield location. In addition to applied technical courses, Industrial Technology includes a co-op experience. Students must complete EBE 1000, Employability Skills, and then work with Career Services to secure an appropriate co-op site.

### Learning Outcomes

Upon completion of an associate degree in Industrial Technology, a graduate will be able to:

- Use computers in troubleshooting, maintenance planning, and report writing.
- Use commonly-available instruments, schematics, operating manuals, and troubleshooting guides.
- Demonstrate and understand the safety requirements for working in an industrial setting.
- Demonstrate fundamental knowledge of power machinery.

### Scholastic Preparation

Students should have had one year of high school algebra or the equivalent. Students may take preparatory courses at Clark State, but it will require a longer amount of time to complete their degree program.



**Transfer Options**

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. Students who wish to continue with their education can apply for Bachelor of Applied Science in Manufacturing Technology Management at Clark State. See the Bachelor's Degree section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
INT 1000	OSHA 10-Hour General Safety	1
INT 1210	Pneumatics I	1
INT 1220	Pneumatics II	1
INT 1230	Pneumatics Troubleshooting	1
INT 1310	AC/DC Electrical Systems	2
ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
<b>Spring</b>		
INT 1240	Hydraulics I	1
INT 1250	Hydraulics II	1
INT 1260	Hydraulics Troubleshooting	1
INT 1320	Electrical Control Relay	1
INT 1350	Motor and Motor Controls	3
INT 1410	Mechanical Systems I	2
ENG 1111	English I	3
MTH 1115	Industrial Calculations	3
<b>Summer</b>		
- -	Co-op Education I*	2
<b>Fall</b>		
INT 1420	Mechanical Systems II	2
INT 1430	Mechanical Systems III	2
INT 2300	Electrical Troubleshooting	3
INT 2320	DC Electronic Drives	2
INT 2500	Programmable Logic Control	3
INT 2510	Process Control	3
<b>Spring</b>		
INT 2330	AC Electronic Drives	2
ECO 2210	Principles of Macroeconomics	3
ENG 2211	Business Communication	3
PHY 1100	Fundamentals of Physics	4
- -	Arts/Humanities or Social/Behavioral Science Elective*	3
	<b>Total Credit Hours</b>	<b>61</b>

\* The co-op must be a minimum of 2 (depends on the degree) semester hours in any combination of co-op (EBE 2701, EBE 2702, EBE 2703, EBE 2704)

\*Arts/Humanities or Social/Behavioral Science Electives recommended are PHL 2000-Critical Thinking, or SPN 1111-Spanish I or ART1300-Appreciation of the Arts.

A complete listing of humanities and social science electives can be found in the College Catalog.

**Manufacturing Engineering Technology**

The Manufacturing Engineering Technology program prepares students for a variety of positions within a manufacturing facility.

Students will choose two certificate programs in the following areas; Computer Numerical Control (CNC), Manufacturing, Additive Manufacturing, Welding, Computer-Aided Design (CAD), Robotics, and Industrial Maintenance. In addition to the courses in these programs, students will complete additional course work for the Manufacturing Engineering Associates Degree.

In addition to applied technical courses, Manufacturing Engineering Technology Associate Degree includes a co-op experience. Students must complete EBE 1000, Employability Skills, as a technical elective and then work with Office of Career Management to secure an appropriate co-op site.

**Embedded Certificate**

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

**Learning Outcomes**

Upon completion of an Associate of Applied Science degree in Manufacturing Technology, a graduate will be able to:

- Design a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Produce a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Document a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Analyze a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.

**Scholastic Preparation**

It is recommended students starting the program have one year each of high school algebra, trigonometry, and physics or the equivalents.

**Transfer Options**

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. Students who wish to continue with their education can apply for the Bachelor of Applied Science in Manufacturing Technology Management at Clark State. See the Bachelor's Degree section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
- -	First Certificate Class #1	3
- -	First Certificate Class #2	3
- -	First Certificate Class #3	3
<b>Spring</b>		
ENT 1000	Introduction to Industrial and Engineering Technology	3
- -	Second Certificate Class #1	3
- -	Second Certificate Class #2	3
- -	Second Certificate Class #3	3
MTH 1280	College Algebra	4
<b>Summer</b>		
- -	Co-op Education I *	1
<b>Fall</b>		
ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENT 2700	Engineering Technology Project	3
ENG 1111	English I	3
STT 2640	Elementary Statistics I	3
<b>Spring</b>		
ENT 2600	Engineering Design	3
ECO 1100	General Economics	3
ENG 2211	Business Communication	3
PHL 2100	Ethics	3
PHY 1100	Fundamentals of Physics	4
	Total Credit Hours	63

\* The co-op must be a minimum of 1 semester hours in any combination of co-op (EBE 2701, EBE 2702, EBE 2703, EBE 2704).

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

## Manufacturing Engineering Technology - Laser Machining Option

### Learning Outcomes

- Design a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Produce a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Document a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Analyze a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Demonstrate laser safety.
- Demonstrate processes related to laser additive manufacturing.
- Demonstrate laser beam welding processes.

Course #	Course Title	Credit Hours
<b>Fall</b>		
LMP 1000	Laser Safety	1
LMP 1010	Laser Fundamentals	3
LMP 1020	Laser Electro-Optics and Measurement	3
CAD 2100	Solid Modeling	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
<b>Spring</b>		
LMP 1100	Laser Additive Manufacturing	3
LMP 2100	Laser Machining	3
LMP 2300	Laser Beam Welding	3
ENT 1000	Introduction to Industrial and Engineering Technology	3
MTH 1280	College Algebra	4
<b>Summer</b>		
EBE 2701	Co-op Education I	1
<b>Fall</b>		
ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENT 2700	Engineering Technology Project	3
STT 2640	Elementary Statistics I	3
ENG 1111	English I	3
<b>Spring</b>		
ENT 2600	Engineering Design	3
ECO 1100	General Economics	3
ENG 2211	Business Communication	3
PHL 2100	Ethics	3
PHY 1100	Fundamentals of Physics	4
	Total Credit Hours	64

## Manufacturing Engineering Technology - Laser Maintenance Option

### Learning Outcomes

- Design a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Produce a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Document a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Analyze a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Demonstrate laser safety.
- Demonstrate troubleshooting skills in laser systems as well as auxilliary.
- Demonstrate basic preventative maintenance, environmental safety measurements and cleaning skills.
- Develop technical documentation for laser maintenance.

Course #	Course Title	Credit Hours
<b>Fall</b>		
LMP 1000	Laser Safety	1
LMP 1010	Laser Fundamentals	3
LMP 1020	Laser Electro-Optics and Measurement	3
LMP 1200	Laser Troubleshooting	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
<b>Spring</b>		
LMP 1400	Laser Maintenance	3
LMP 1450	Laser Maintenance Documentation	3
ENT 1000	Introduction to Industrial and Engineering Technology	3
MTH 1280	College Algebra	4
<b>Summer</b>		
EBE 2701	Co-op Education I	1
<b>Fall</b>		
ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENT 2700	Engineering Technology Project	3
ENG 1111	English I	3
STT 2640	Elementary Statistics I	3
<b>Spring</b>		
ENT 2600	Engineering Design	3
ECO 1100	General Economics	3
ENG 2211	Business Communication	3
PHL 2100	Ethics	3
PHY 1100	Fundamentals of Physics	4
	Total Credit Hours	61

## Mechanical Engineering Technology

The Mechanical Engineering Technology program is designed to prepare students for entry-level technology occupations related to mechanical engineering. These occupations include a variety of jobs titles in the areas of product design, drafting, analysis, manufacturing, quality control, and testing. Skills in the area of creating and interpreting engineering drawings and the practices and procedures of manufacturing and principles of product design are emphasized.

In addition to applied technical courses, Mechanical Engineering includes a co-op experience. Students must complete EBE 1000, Employability Skills, and then work with Career Services to secure an appropriate co-op site.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an associate degree in Mechanical Engineering Technology, a graduate will be able to:

- Design a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Produce a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Document a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.
- Analyze a finished product per quality specifications using knowledge of engineering materials, metrology and the manufacturing process.

### Scholastic Preparation

It is recommended students starting the program have taken high-school algebra, trigonometry and physics.

### Transfer Options

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. Students who wish to continue with their education can apply for the Bachelor of Applied Science in Manufacturing Technology Management offered at Clark State. See the Bachelor's Degree section of the catalog for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
ENG 1111	English I	3
MTH 1280	College Algebra	or
MTH 2200	Calculus I	4

### Spring

ENT 1500	Engineering Materials	3
INT 1320	Electrical Control Relay	1
INT 2500	Programmable Logic Control	3
ENG 1112	English II	3
MTH 1340	Pre-Calculus	or
MTH 2220	Calculus II	5

### Summer

- -	Co-op Education I *	2
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### Fall

ENT 2100	Manufacturing Processes	3
CAD 2100	Solid Modeling	3
PHY 1501	General Physics I with Algebra	or
PHY 2501	College Physics I with Calculus	5
- -	Arts/Humanities or Social Behavioral	3

### Spring

ENT 2200	Statics	3
ENT 2300	Strength of Materials	3
ENT 2600	Engineering Design	3
PHY 1502	General Physics II with Algebra	or
PHY 2502	College Physics II with Calculus	5
	Total Credit Hours	61

\*Arts/Humanities or Social/Behavioral Science Electives recommended are PSY 1111-Psychology I, or SPN 1111-Spanish I or ART1300-Appreciation of the Arts.

Students wishing to seek an Engineering Technology Bachelor's Degree at a four-year university are highly encouraged to review articulation agreements and consult with their academic advisor.

The co-op must be a minimum of two semester hours in any combination of co-op (EBE 2701, EBE 2702, EBE 2703, EBE 2704).

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students, and those taking college preparatory courses, will require additional semesters of study.

A complete listing of humanities and social science electives can be found in the College Catalog.

## ENGINEERING, MANUFACTURING, AND MECHANICAL SERVICES CERTIFICATES

### Additive Manufacturing Technical Certificate

The Additive Manufacturing Certificate is designed for students who wish to enhance their skills in areas related to 3D printing and scanning. Students can apply the following program courses to the Manufacturing Engineering Technology Associates Degree.

#### Learning Outcomes

Upon completion of the Additive Manufacturing Technical Certificate, a graduate will be able to:

- Conceptualize objects using 3D printers
- Design and evaluate 3D models for functional improvements

Course #	Course Title	Credit Hours
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#### Fall

ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1050	Manufacturing Foundations	4
ENT 1410	Introduction to Additive Manufacturing	3
CAD 2100	Solid Modeling	or
CAD 2110	SolidWorks	3
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1

#### Spring

ENT 1420	Rapid Prototyping Model Design and Fabrication	3
ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENG 1111	English I	3
MTH 1280	College Algebra	4
	Total Credit Hours	31

## Computer Numerical Control (CNC) - LATHE Short-Term Technical Certificate

Students pursuing this short-term technical certificate will learn basic techniques to properly setup and operate a CNC lathe. Students can complete this certificate in as little as 8 weeks.

### Learning Outcomes

Upon completion of the Computer Numerical Control - Lathe Short-Term Technical Certificate, a graduate will be able to:

- Operate a computer numerical control lathe.

Course #	Course Title	Credit Hours
ENT 1050	Manufacturing Foundations	4
ENT 1310	Computer Numerical Control (CNC) Machine Operator - Turning	3
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
	Total Credit Hours	9

## Computer Numerical Control (CNC) - MILL Short-Term Technical Certificate

Students pursuing this short-term technical certificate will learn basic techniques to properly setup and operate a CNC mill. Students can complete this certificate in as little as 8 weeks.

### Learning Outcomes

Upon completion of the Computer Numerical Control - MILL Short-Term Technical Certificate, a graduate will be able to:

- Operate a computer numerical control mill.

Course #	Course Title	Credit Hours
ENT 1050	Manufacturing Foundations	4
ENT 1320	Computer Numerical Control (CNC) Machine Operator - Milling	3
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
	Total Credit Hours	9

## Computer Numerical Control (CNC) Short-Term Technical Certificate

The Computer Numerical Control (CNC) Certificate is designed for students who wish to enhance their skills in areas related to CNC Machine Operation and CNC programming. Students can apply the following program courses to the Manufacturing Engineering Technology Associates Degree.

### Learning Outcomes

Upon completion of the Computer Numerical Control (CNC) Short-Term Technical Certificate, a graduate will be able to:

- Operate a computer numerical control turning center
- Operate a computer numerical control milling center
- Understand basic G and M codes and program structure

Course #	Course Title	Credit Hours
<b>Fall</b>		

ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1050	Manufacturing Foundations	4
ENT 1310	Computer Numerical Control (CNC) Machine Operator - Turning	3
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1

### Spring

ENT 1320	Computer Numerical Control (CNC) Machine Operator - Milling	3
ENT 1330	Fundamentals of Computer Numerical Control (CNC)	3
ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
	Total Credit Hours	24



## Computer Numerical Control (CNC) Technical Certificate

The Computer Numerical Control (CNC) Technical Certificate is designed for students who wish to enhance their skills in areas related to CNC Machine Operation and CNC programming. Students can apply the following program courses to the Manufacturing Engineering Technology Associates Degree.

### Learning Outcomes

Upon completion of the Computer Numerical Control (CNC) Technical Certificate, a graduate will be able to:

- Operate a computer numerical control turning center
- Operate a computer numerical control milling center
- Understand basic G and M codes and program structure

Course #	Course Title	Credit Hours
<b>Fall</b>		
ENT 1050	Manufacturing Foundations	4
ENT 1310	Computer Numerical Control (CNC) Machine Operator - Turning	3
ENT 1320	Computer Numerical Control (CNC) Machine Operator - Milling	3
ENT 1330	Fundamentals of Computer Numerical Control (CNC)	3
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
<b>Spring</b>		
ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENG 1111	English I	3
MTH 1280	College Algebra	4
	Total Credit Hours	31

## Computer-Aided Design - Architectural Technical Certificate

The Computer-Aided Design certificate is design to provide the technical background necessary to produce residential and civil drawings and renderings using a variety of computer-aided design software. Residential/Civil coursework is included to help students understand the principles of residential and civil design.

Certificate programs are designed for those students who seek to enhance their job-related skills in a specialized area. These certificates are typically a portion of the coursework in one of the associate degree programs. Coursework Included in this certificate program can be applied towards Computer-Aided Design and Manufacturing Engineering Technology associate degrees.

### Learning Outcomes

Upon completion of the Computer-Aided Design Architectural Technical Certificate, a graduate will be able to:

- Produce residential and civil documentation using computer software.
- Create 3D renderings of residential buildings.
- Design and produce prints for a residential dwelling.

Course #	Course Title	Credit Hours
<b>Fall</b>		
CAD 1101	Computer-Aided Design I	3
CAD 1310	Residential Architecture and Design	3
CAD 2310	Introduction to Civil Engineering Technology	3
ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
<b>Spring</b>		
ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENG 1111	English I	3
MTH 1280	College Algebra	4
	Total Credit Hours	31

## Computer-Aided Design Architectural Short-Term Technical Certificate

Students pursuing this short-term technical certificate will learn basic residential drawing techniques used in architecture. Students can complete this certificate in as little as 16 weeks.

### Learning Outcomes

Upon completion of the Computer-Aided Design Architectural Short-Term Technical Certificate, a graduate will be able to:

- Design and produce prints for a residential dwelling.

Course #	Course Title	Credit Hours
CAD 1101	Computer-Aided Design I	3
CAD 1310	Residential Architecture and Design	3
ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
	Total Credit Hours	12

## Computer-Aided Design Manufacturing Short-Term Technical Certificate

Students pursuing this short-term technical certificate will learn basic three-dimensional drawing techniques used in manufacturing. Students can complete this certificate in as little as 16 weeks.

### Learning Outcomes

Upon completion of the Computer-Aided Design Manufacturing Short-Term Technical Certificate, a graduate will be able to:

- Document a part using current 3D computer-aided design software.

Course #	Course Title	Credit Hours
CAD 2100	Solid Modeling	or
CAD 2110	SolidWorks	3
CAD 2200	Advanced Solid Modeling	3
ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
	Total Credit Hours	12

## Computer-Aided Design Manufacturing Technical Certificate

The Computer-Aided Design Certificate is designed to provide the technical background necessary to produce mechanical drawings using computer-aided drafting techniques. Manufacturing coursework is included to help students understand the principles of manufacturability in mechanical design.

Certificate programs are designed for those students who seek to enhance their job-related skills in a specialized area. These certificates are typically a portion of the courses in one of the associate degree programs. Coursework included in this certificate program can be applied towards Computer-Aided Design and Manufacturing Engineering Technology Associate degrees.

### Learning Outcomes

Upon completion of the Computer-Aided Design Certificate - Manufacturing Option, a graduate will be able to:

- Design and document a part using current 3D computer-aided design software
- Validate a 3D assembly
- Use a computer-aided manufacturing software to prepare a part for production.

Course #	Course Title	Credit Hours
<b>Fall</b>		
CAD 2100	Solid Modeling	or
CAD 2110	SolidWorks	3
CAD 2200	Advanced Solid Modeling	3
CAD 2300	Computer-Aided Manufacturing	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1

### Spring

ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENG 1111	English I	3
MTH 1280	College Algebra	4
	Total Credit Hours	31

## Diesel Technology Short-Term Technical Certificate

The diesel industry is growing and there is a current and future need for qualified technicians. Diesel engines are more powerful and durable than gas engines, making them a popular alternative in the trucking, busing, agriculture, and construction industries. Diesel technicians perform complete engine overhauls, minor preventative maintenance services, and everything in between. Job opportunities are going unfilled in the Miami Valley and throughout Ohio and the country.

The Clark State Diesel Technology certificate provides the introductory skills needed to begin working in the diesel-maintenance field. All courses taken on this certificate can be applied to the Associate of Technical Studies degree in Diesel Technology.

### Degree Availability

This program is taught in a modern, clean training facility at the Ohio Hi-Point Career Center at 2280 State Route 540 in Bellefontaine, Ohio. Some general education courses may need to be completed online or at our Springfield location.

### Learning Outcomes

Upon completion of the Diesel Technology Short-Term Technical Certificate, a graduate will be able to:

- Diagnose and repair medium and heavy-duty truck engines
- Diagnose and repair medium and heavy-duty truck suspension and steering systems
- Diagnose and repair medium and heavy-duty truck brake systems
- Diagnose and repair medium and heavy-duty truck electrical/electronic systems
- Perform preventative maintenance and inspections on medium and heavy-duty trucks

Course #	Course Title	Credit Hours
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#### Fall

DSL 1100	Hydraulic Theory and Operation	2
DSL 1200	Fundamentals of Engines	3
DSL 1300	Preventative Maintenance	2

#### Spring

DSL 1500	Heavy Truck Drive Trains	3
DSL 1550	Truck Steering and Suspension	2
DSL 1650	Truck Brake Systems	3
WLD 1000	Introduction to Welding Processes	3

#### Summer

MTH 1115	Industrial Calculations	3
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#### Fall

DSL 1600	Basic Electrical	3
	Total Credit Hours	24

## Electrical Systems Short-Term Technical Certificate

Students pursuing this short-term technical certificate will learn basic electrical concepts, electrical troubleshooting, electronic drives, and a variety of electric motor concepts. Students can complete this certificate in as little as 16 weeks.

### Learning Outcomes

Upon completion of the Electrical Systems Short-Term Technical Certificate, a graduate will be able to:

- Demonstrate knowledge of electrical systems used for power and control in industrial and commercial facilities.

Course #	Course Title	Credit Hours
INT 1000	OSHA 10-Hour General Safety	1
INT 1310	AC/DC Electrical Systems	2
INT 1320	Electrical Control Relay	1
INT 1350	Motor and Motor Controls	3
INT 2300	Electrical Troubleshooting	3
INT 2330	AC Electronic Drives	2
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
	Total Credit Hours	17

## Heating, Ventilation, Air Conditioning, and Refrigeration Departmental Certificate (Clark County CTC)

Students completing the Heating, Ventilating, Air Conditioning, and Refrigeration (HVAC-R) departmental certificate will have the essential skills sets to find employment with a variety of companies providing heating ventilating and air conditioning services. Beginning the HVAC-R course work in January, a student can complete the certificate within twelve months provided the student has no remedial education needs and is able to take the classes as prescribed.

This program is taught in Springfield at Springfield-Clark County Career Technology Center (CTC) at 1901 Selma Road near our Leffel Lane location. General education courses not offered at Springfield-Clark CTC or Greene County Career Center may be completed online or at one of Clark State's locations in Springfield, Bellefontaine or Beavercreek.

### Learning Outcomes

Upon completion of the Heating, Ventilation, Air Conditioning, and Refrigeration Departmental Certificate (Clark County CTC), a graduate will be able to:

- Explain thermodynamics, heat, fluids, and pressures for refrigeration and EPA compliance.
- Prescribe the procedures for making electrical measurements.
- Diagnose and repair gas, electric, fuel oil furnaces and air conditioners - heat pump.
- Determine testing and analyzing instruments for troubleshooting and calculating the combustion process.

Course #	Course Title	Credit Hours
<b>Spring</b>		
HVC 1015	HVAC-R Fundamentals and Practices	3
HVC 1100	Basic Electricity and Motors for HVAC-R	4
HVC 1215	EPA Certifications	2
<b>Summer</b>		
HVC 1315	Commercial Refrigeration	2
HVC 2030	Heat Pump Systems	2
HVC 2315	Air Conditioning	2
HVC 2415	Indoor Air Quality and Distribution	3
INT 1000	OSHA 10-Hour General Safety	1
<b>Fall</b>		
HVC 2010	Residential Gas Heating	4
HVC 2040	Oil and Hydronic Heat	2
HVC 2220	Residential Electric Heating	1
HVC 2700	HVAC-R Job Skills	2
	Total Credit Hours	28

## HVAC EPA 608 Short-Term Technical Certificate

This certificate aligns with the EPA Section 608 Certification. The certification is required for technicians who work on equipment that uses ozone-depleting or controlled refrigerants and ensures that technicians are properly trained to handle refrigerants safely. Students are awarded the industry certification upon successful completion of the course and exam.

### Learning Outcomes

- Examine the requirements for the Environmental Protection Agency certification.
- Practice using refrigeration cylinders and valves.

Course #	Course Title	Credit Hours
HVC 1215	EPA Certifications	2
	Total Credit Hours	2

## HVAC-R Basic Electrical Short-Term Technical

This certificate aligns with the HVAC Excellence Electrical Employment Ready certification from the ESCO Institute. The outcomes include knowledge of electrical components, meter usage, safety, theory, troubleshooting, fundamentals of motors and capacitors, and interpreting electrical diagrams. Students are awarded the industry certification upon successful completion of the course and examination.

### Learning Outcomes

- Analyze electrical circuitry.
- Examine motors used in HVAC-R operations.

Course #	Course Title	Credit Hours
HVC 1100	Basic Electricity and Motors for HVAC-R	4
	Total Credit Hours	4

## Hydraulic Systems Short-Term Technical Certificate

Students pursuing this short-term technical certificate will learn basic hydraulic concepts and hydraulic troubleshooting. Students can complete this certificate in as little as 8 weeks.

### Learning Outcomes

Upon completion of the Hydraulic Systems Short-Term Technical Certificate, a graduate will be able to:

- Demonstrate knowledge of hydraulics circuits, principles of hydraulic pressure and flow and hydraulic speed control.

Course #	Course Title	Credit Hours
INT 1000	OSHA 10-Hour General Safety	1
INT 1240	Hydraulics I	1
INT 1250	Hydraulics II	1
INT 1260	Hydraulics Troubleshooting	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
	Total Credit Hours	9

## Industrial Maintenance Short-Term Technical Certificate

The Industrial Maintenance Short-Term Technical Certificate provides a broad base of courses in the field of industrial maintenance. Course work completed in this certificate program can be applied toward the Industrial Technology and Manufacturing Engineering Technology Associate Degrees.

### Learning Outcomes

Upon completion of the Industrial Maintenance Short-Term Technical Certificate, a graduate will be able to:

- Read Schematics for fluid systems, electrical systems, and mechanical systems.
- Program, connect, and test programmable logic control processes.
- Demonstrate knowledge of direct and alternating current motors including their performance characteristics and application.

Course #	Course Title	Credit Hours
Fall		
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
- -	Short-Term Technical Certificate 1*	3

### Spring

ENT 1000	Introduction to Industrial and Engineering Technology	3
- -	Short-Term Technical Certificate 2*	3
- -	Short-Term Technical Certificate 3*	3
	Total Credit Hours	18

\*Choose 3 Short-Term Technical Certificates for a total of 18-38 credit hours: Pneumatic Systems, Hydraulic Systems, Mechanical Systems, Electrical Systems or Process Control.



## Laser Additive Short-Term Technical Certificate

Additive manufacturing is becoming more prevalent due to its capability to save time and money in numerous ways. Within industry, two laser additive methods are primarily used: stereolithography and laser powder bed fusion. Students will acquire laser additive manufacturing skills while also utilize CAD and g-code, parallel to Laser Machining/Welding. Technicians are required to employ practical skills to manufacture parts in accordance with project guidelines, just as industry would require. Students will utilize skills from generating a part model all the way to manufacturing an assembly and gain understanding of every step of these processes.

Course #	Course Title	Credit Hours
<b>Fall</b>		
LMP 1000	Laser Safety	1
LMP 1010	Laser Fundamentals	3
LMP 1020	Laser Electro-Optics and Measurement	3
CAD 2100	Solid Modeling	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
<b>Spring</b>		
LMP 1100	Laser Additive Manufacturing	3
	Total Credit Hours	19

## Laser Beam Welding Short-Term Technical Certificate

Welding is a staple within industrial manufacturing. Because there are so many variations of both, general welding and LBW, there are many nuances to the various welding processes. Students will gain an understanding of these various welding mechanisms, both to expand their skillsets and reduce future errors. They will learn the theory behind laser-focused welding processes and apply this knowledge in a hands-on setting.

Course #	Course Title	Credit Hours
<b>Fall</b>		
LMP 1000	Laser Safety	1
LMP 1010	Laser Fundamentals	3
LMP 1020	Laser Electro-Optics and Measurement	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
<b>Spring</b>		
LMP 2300	Laser Beam Welding	3
	Total Credit Hours	16

## Laser Foundations Short-Term Technical Certificate

The effect of lasers and laser-based instrument is enormous in our everyday life. Photonics has become a booming industry and is going to be the next big thing in the following decades. Laser foundation technical certificate will boost the students to learn the fundamentals of lasers and photonics systems as well as teach them working in a safe environment. Students will acquire knowledge and skills to build, modify, operate and troubleshoot the specialized laser electro-optic devices and sensors found in many laser/optical systems.

Course #	Course Title	Credit Hours
LMP 1000	Laser Safety	1
LMP 1010	Laser Fundamentals	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
	Total Credit Hours	10

## Laser Machining Short-Term Technical Certificate

Laser machining processes are a quick, lower cost way of cutting, etching, or marking materials, as compared to other methods. Developing an intuition for part machining allows for a reduction in errors and allows for parts to be manufactured more accurately. Students will demonstrate an understanding of how to operate machines conducting these processes, and the associated physics.

Course #	Course Title	Credit Hours
<b>Fall</b>		
LMP 1000	Laser Safety	1
LMP 1010	Laser Fundamentals	3
LMP 1020	Laser Electro-Optics and Measurement	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
<b>Spring</b>		
LMP 2100	Laser Machining	3
	Total Credit Hours	16

## Laser Machining Technical Certificate

Laser machining processes are a quick, lower cost way of cutting, etching, or marking materials, as compared to other methods. Developing an intuition for part machining allows for a reduction in errors and allows for parts to be manufactured more accurately. Students will demonstrate an understanding of how to operate machines conducting these processes, and the associated physics.

Certificate programs are designed for those students who seek to enhance their job-related skills in a specialized area. These certificates are typically a portion of the coursework in one of the associate degree programs. Coursework Included in this certificate program can be applied towards Laser Material Processing and Manufacturing Engineering Technology associate degrees.

Course #	Course Title	Credit Hours
<b>Fall</b>		
LMP 1000	Laser Safety	1
LMP 1010	Laser Fundamentals	3
LMP 1020	Laser Electro-Optics and Measurement	3
CAD 2100	Solid Modeling	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
<b>Spring</b>		
LMP 1100	Laser Additive Manufacturing	3
LMP 2100	Laser Machining	3
LMP 2300	Laser Beam Welding	3
ENG 1111	English I	3
MTH 1280	College Algebra	4
	Total Credit Hours	32

## Laser Maintenance Short-Term Technical Certificate

Preventative maintenance is a large part of eliminating machine problems and allows for a more streamlined future diagnostic process, should a machine fail. Regardless of the laser machine used, there are some common techniques and components used. On the other hand, Laser tool heads are a common part used at some point within every Laser Manufacturing course. There are frequently used components and construction styles within these various areas. Students will employ practical skills to fix issues associated with laser tool heads.

Course #	Course Title	Credit Hours
LMP 1000	Laser Safety	1
LMP 1010	Laser Fundamentals	3
LMP 1020	Laser Electro-Optics and Measurement	3
LMP 1400	Laser Maintenance	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
	Total Credit Hours	16

## Laser Maintenance Technical Certificate

Preventative maintenance is a large part of eliminating machine problems and allows for a more streamlined future diagnostic process, should a machine fail. Regardless of the laser machine used, there are some common techniques and components used. On the other hand, Laser tool heads are a common part used at some point within every Laser Manufacturing course. There are frequently used components and construction styles within these various areas. Students will employ practical skills to fix issues associated with laser tool heads. Certificate programs are designed for those students who seek to enhance their job-related skills in a specialized area. These certificates are typically a portion of the coursework in one of the associate degree programs. Coursework Included in this certificate program can be applied towards Laser Material Processing and Manufacturing Engineering Technology associate degrees.

Course #	Course Title	Credit Hours
<b>Fall</b>		
LMP 1000	Laser Safety	1
LMP 1010	Laser Fundamentals	3
LMP 1020	Laser Electro-Optics and Measurement	3
LMP 1200	Laser Troubleshooting	3
INT 1000	OSHA 10-Hour General Safety	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
<b>Spring</b>		
LMP 1400	Laser Maintenance	3
LMP 1450	Laser Maintenance Documentation	3
ENT 1000	Introduction to Industrial and Engineering Technology	3
MTH 1280	College Algebra	4
ENG 1111	English I	3
	Total Credit Hours	32

## Lean Six Sigma Yellow-Green Belts Short-Term Technical Certificate

This certificate ensures that upon completion, students possess a thorough understanding of enhanced problem-solving skills, with an emphasis on the DMAIC (Define, Measure, Analyze, Improve and Control). It prepares students for workplace employment by focusing on the basic knowledge and skills required to be an effective team member on problem-solving teams. Lean Six Sigma Yellow and Green Belts, two nationally recognized credentials, are embedded in this certificate and the courses are taught by a certified Six Sigma trainer. Lean Six Sigma is a data-driven process improvement methodology that combines the principles of Lean (waste reduction) and Six Sigma (variation reduction) to enhance efficiency, quality, and customer satisfaction. These principles are applied to projects across industries, including manufacturing, software development, cybersecurity, healthcare, service industries, and more. Yellow Belt holders understand the basics of Lean Six Sigma and are typically project team members. Green Belt holders lead or support projects and can be project managers and team leaders of more challenging projects.

### Learning Outcomes

- Recognize how to define a problem.
- Recognize how to measure a problem.
- Recognize how to analyze root causes of a problem.
- Recognize how to implement solutions.
- Recognize how to maintain the achieved gains.
- Lead an improvement team through the development of a problem solving project (Define).
- Illustrate the details related to the direction of the problem solving project (Measure).
- Coordinate the analysis of the metrics and data surrounding the root cause of the problem (Analyze).
- Demonstrate methods and outcomes for potential problem solutions (Improve).
- Recognize how to lead improvement teams in maintaining the achieved gains (Control).

Course #	Course Title	Credit Hours
MGT 1500	Lean Six Sigma Yellow Belt / Problem Solving for Team Members	1
MGT 1510	Lean Six Sigma Green Belt / Problem Solving for Team Leaders	3
	Total Credit Hours	4

## Manufacturing Foundations Short-Term Technical Certificate

The ERG-Manufacturing Foundations Short-Term Technical Certificate is designed for students who are looking for entry-level skills in areas related to manufacturing. The program courses are included in all other Industrial and Engineering certificate and associate degree program.

### Learning Outcomes

Upon completion of the Manufacturing Foundation Short-Term Technical Certificate, a graduate will be able to:

- Obtain the 10-Hour OSHA General Safety certification
- Create a resume and cover letter
- Develop interviewing skills
- Demonstrate how to use precision measurement tools
- Demonstrate successful print reading and part visualization

Course #	Course Title	Credit Hours
ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
	Total Credit Hours	6

## Mechanical Systems Short-Term Technical Certificate

Students pursuing this short-term technical certificate will learn basic mechanical systems including setup and troubleshooting. Students can complete this certificate in as little as 16 weeks.

### Learning Outcomes

Upon completion of the Mechanical Systems Short-Term Technical Certificate, a graduate will be able to:

- Demonstrate knowledge of mechanical systems commonly found in both automated and manual machines used in every industry.

Course #	Course Title	Credit Hours
INT 1000	OSHA 10-Hour General Safety	1
INT 1410	Mechanical Systems I	2
INT 1420	Mechanical Systems II	2
INT 1430	Mechanical Systems III	2
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
	Total Credit Hours	12

## Modeling and Simulation Foundations Departmental Certificate

### Learning Outcomes

- Demonstrate basic knowledge of manufacturing processes, including safety, cost, documentation, material selection, fabrication and assembly
- Design, produce, and document a finished product per quality specifications using knowledge of engineering, materials, metrology and manufacturing processes.
- Apply Design to produce an illustrated part/maintenance manual.
- Demonstrate a basic knowledge of materials properties, manufacturing methods, and cost.
- Formulate and analyze the mathematical models for physical and engineering problems.
- Develop database systems to meet business data requirements.
- Analyze information system requirements and design appropriate software solutions.
- Write computer programs to implement information system designs.

Course #	Course Title	Credit Hours
<b>Fall</b>		
ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
- -	(New Course)	3
ENG 1111	English I	3
CSD 1510	Programming Fundamentals with Python	3
<b>Spring</b>		
CSE 1110	Introduction to Cybersecurity	3
- -	(New Course)	3
- -	(New Course)	4
EBE 1000	Employability Skills	1
- -	Social/Behavioral Science Elective (GA)	3
	Total Credit Hours	28

## Ohio Manufacturing Short-Term Technical Certificate

The Ohio Manufacturing Certificate is designed for students who wish to enhance their skills in areas related to manufacturing. Course work completed in this certificate program can be applied toward the Manufacturing Engineering Technology Associates Degree. Some of the courses are taught in the Directed Learning Lab.

### Learning Outcomes

Upon completion of the Ohio Manufacturing Short-Term Technical Certificate, a graduate will be able to:

- Explain the structural and mechanical properties of ferrous and non-ferrous materials and alloys and non-metallic materials
- Develop three-dimensional models
- Use prints to make parts within a specific tolerance

Course #	Course Title	Credit Hours
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#### Fall

CAD 2100	Solid Modeling	3
ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1

#### Spring

ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENG 1111	English I	3
MTH 1115	Industrial Calculations	3
	Total Credit Hours	24

## Pneumatic Systems Short-Term Technical Certificate

Students pursuing this short-term technical certificate will learn basic pneumatic systems including setup and troubleshooting. Students can complete this certificate in as little as 8 weeks.

### Learning Outcomes

Upon completion of the Pneumatic Systems Short-Term Technical Certificate, a graduate will be able to:

- Demonstrate knowledge of pneumatics systems and troubleshooting commonly found in industry.

Course #	Course Title	Credit Hours
INT 1000	OSHA 10-Hour General Safety	1
INT 1210	Pneumatics I	1
INT 1220	Pneumatics II	1
INT 1230	Pneumatics Troubleshooting	1
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
	Total Credit Hours	9

## Process Control Short-Term Technical Certificate

Students pursuing this short-term technical certificate will learn programmable control logic (PLC) programming and troubleshooting. Students can complete this certificate in as little as 16 weeks.

### Learning Outcomes

Upon completion of the Process Control Systems Short-Term Technical certificate, a graduate will be able to:

- Program, connect, and test programmable logic control systems.

Course #	Course Title	Credit Hours
INT 1000	OSHA 10-Hour General Safety	1
INT 1320	Electrical Control Relay	1
INT 2500	Programmable Logic Control	3
INT 2510	Process Control	3
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
	Total Credit Hours	13



## Robotics Technical Certificate

The Robotics Technical Certificate is designed for students who wish to learn how robots perform in a manufacturing system. Students can apply the program courses to the Manufacturing Engineering Technology Associates Degree.

### Learning Outcomes

Upon completion of the Robotics Technical Certificate, a graduate will be able to:

- Operate a FANUC and MOTOMAN robot.
- Program a robot.
- Integrate robots within a manufacturing work cell.

Course #	Course Title	Credit Hours
<b>Fall</b>		
ENT 1050	Manufacturing Foundations	4
ENT 1600	Introduction to Robotics	3
ENT 1650	Robotic Applications	3
ENT 1750	Robotic Welding	3
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
<b>Spring</b>		
ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1500	Engineering Materials	3
ENT 2100	Manufacturing Processes	3
ENG 1111	English I	3
MTH 1280	College Algebra	4
	Total Credit Hours	31

## Semiconductor Maintenance Technician Technical Certificate

This certificate prepares students for entry level industrial maintenance positions in the semiconductor supply chain. Students earn the OSHA 10 hour safety certification and this curriculum aligns with the following:

- National Institute for Metalworking Skills (NIMS) - Measurement, Materials, and Safety
- National Institute for Metalworking Skills (NIMS) - Electrical Systems
- National Institute for Metalworking Skills (NIMS) - Basic Hydraulic Systems
- National Institute for Metalworking Skills (NIMS) - Basic Mechanical Systems
- National Institute for Metalworking Skills (NIMS) - Basic Pneumatic Systems

### Learning Outcomes

- Maintain semiconductor manufacturing equipment.
- Apply troubleshooting skills to identify and diagnose equipment malfunctions.
- Demonstrate proper gowning and material handling procedures.
- Utilize software interfaces for equipment control and monitoring and records of equipment maintenance activities.

Course #	Course Title	Credit Hours
<b>Fall</b>		
INT 1000	OSHA 10-Hour General Safety	1
INT 1010	Introduction to Vacuum Systems	2
INT 1210	Pneumatics I	1
INT 1240	Hydraulics I	1
INT 1410	Mechanical Systems I	2
ENT 1010	Introduction to Semiconductors	3
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
<b>Spring</b>		
INT 1220	Pneumatics II	1
INT 1230	Pneumatics Troubleshooting	1
INT 1250	Hydraulics II	1
INT 1260	Hydraulics Troubleshooting	1
INT 1310	AC/DC Electrical Systems	2
INT 1320	Electrical Control Relay	1
INT 1420	Mechanical Systems II	2
INT 1430	Mechanical Systems III	2
INT 2300	Electrical Troubleshooting	3
ENT 1000	Introduction to Industrial and Engineering Technology	3
	Total Credit Hours	32

## Semiconductor Technician Short-Term Technical Certificate

This certificate introduces the foundations of pursuing careers in the semiconductor supply chain. Students learn basic techniques to properly don and doff cleanroom personal protective equipment, understand basic concepts in the semiconductor industry and vacuums systems used in the semiconductor manufacturing process. Students can complete this certificate in as little as 8 weeks. Students earn the OSHA 10 hour safety certification and this curriculum aligns with the following:

- National Institute for Metalworking Skills (NIMS) - Measurement, Materials, and Safety

### Learning Outcomes

- Obtain the 10-Hour OSHA General Safety certification.
- Demonstrate proper cleanroom protocols.
- Explain semiconductor manufacturing processes.

Course #	Course Title	Credit Hours
INT 1000	OSHA 10-Hour General Safety	1
INT 1010	Introduction to Vacuum Systems	2
ENT 1010	Introduction to Semiconductors	3
ENT 1050	Manufacturing Foundations	4
EBE 1000	Employability Skills	1
	Total Credit Hours	11

## Supervisory Control and Data Acquisition (SCADA) Departmental Certificate

The SCADA Certificate is designed for students who wish to learn additional information in control process applications in a manufacturing facility. Students can apply the program courses to the Manufacturing Engineering Technology Associates Degree.

### Learning Outcomes

Upon completion of the SCADA Departmental Certificate, a graduate will be able to:

- Monitor and control process applications using sensors networked to equipment.

Course #	Course Title	Credit Hours
<b>Fall</b>		
ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1050	Manufacturing Foundations	4
INT 1310	AC/DC Electrical Systems	or
INT 1320	Electrical Control Relay	1
INT 2500	Programmable Logic Control	3
<b>Spring</b>		
INT 1000	OSHA 10-Hour General Safety	1
INT 2510	Process Control	3
INT 2520	Supervisory Control and Data Acquisition (SCADA)	3
EBE 1000	Employability Skills	1
	Total Credit Hours	19

## Welding Short-Term Technical Certificate

The Welding Certificate is designed for students who wish to enhance their skills in areas related to SMAW, GMAW, GTAW, oxyacetylene, and plasma cutting. Students can apply the program courses to the Manufacturing Engineering Technology Associates Degree.

### Learning Outcomes

Upon completion of the Welding Short-Term Technical Certificate, a graduate will be able to:

- Produce a welded assembly from a print.
- Accurately produce and read prints and welding symbols.
- Weld in 1G, 1F, 2G, 2F, 3G, 3F, 4G, and 4F in GMAW, SMAW, and GTAW

Course #	Course Title	Credit Hours
<b>Fall</b>		
WLD 1000	Introduction to Welding Processes	3
ENT 1000	Introduction to Industrial and Engineering Technology	3
ENT 1050	Manufacturing Foundations	4
INT 1000	OSHA 10-Hour General Safety	1
EBE 1000	Employability Skills	1
<b>Spring</b>		
WLD 1010	Gas Metal and Flux Cored Arc Welding (GMAW/FCAW)	3
WLD 1020	Shielded Metal Arc Welding (SMAW)	3
WLD 1030	Gas Tungsten Arc Welding (GTAW)	3
	Total Credit Hours	21

# HEALTH

## Advanced Standing Registered Nursing

The Advanced Standing Registered Nursing Programs provides as fast track for nurses in as little as 20 months. This fast track LPN to RN program option meets the educational needs of the licensed practical nurse desiring to become a registered nurse.

In this fast track program, Registered Nursing graduates are prepared to function in beginning staff-level registered nurse positions in hospitals, extended care facilities, clinics and comparable health care facilities as members of a health care team.

### Licensure

Upon completion of the program, the graduate is eligible to apply to take the NCLEX-RN examination. Licensure is mandatory for practice as a RN. Candidates for licensure in Ohio must obtain a criminal background check and disclose information related to any prior felony or misdemeanor, crimes involving gross immorality or moral turpitude, violation of a drug law, and/or recent diagnosis or treatment of a psychotic disorder. The Ohio Board of Nursing will determine whether the candidate may take the licensing exam.

### Student Achievement Data

The nursing program publishes student achievement data that is required by the Accreditation Commission for Education in Nursing (ACEN). The data includes the graduates' success on the licensure examination, program completion rates, and employment rates.

**Licensure Examination Pass Rate** - Performance on the licensure examination for first-time test-takers  
Fall 2022 and Spring 2023 first-time test-takers from all cohorts (RN, LPN to RN, and Paramedic to RN)  
Fall 2022 Graduates- 80.00%  
Spring 2023 Graduates- 95.65

**Program Completion Rate** - Percentage of students who graduate within a defined period of time. The definition used by ACEN for the program completion rate is the number of students who complete the program in no more than 150% of the stated program length beginning with enrollment in the first nursing course.  
2022 fall and 2022 spring All cohorts (RN, LPN to RN, and Paramedic to RN) = 75%

**Job Placement Rate** - Percentage of graduates, responding to a graduate survey, who were employed in a position for which the program prepared them six (6) to twelve (12) months after graduating.  
2022 fall and 2022 spring rates for all graduates (RN, LPN to RN, and Paramedic to RN) = 100%

### Bachelor of Science in Nursing (BSN) Completion Option

Graduates of the Associate of Applied Science degree in Nursing are prepared to obtain licensure and employment as a registered nurse. Graduates are also prepared to continue their education and obtain a bachelor's degree in nursing. A number of colleges and universities have designed bachelor's nursing completion programs for associate degree prepared registered nurses. To

investigate these programs affiliated with Clark State, please use the following link to take you to Clark State's transfer guides. [go.clarkstate.edu/transfer-guides/](https://go.clarkstate.edu/transfer-guides/)

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Registered Nursing, a graduate will be able to:

- **Patient Centered Care/Human Flourishing:** The student will engage in professional nursing practice, providing holistic, individualized, compassionate care that is patient centered and culturally and developmentally appropriate across the lifespan.
- **Leadership and Professionalism/Professional Identity:** The student will transition to the role of the professional nurse, incorporating legal, ethical, and professional standards.
- **Evidence Based Practice and Quality Improvement/Spirit of Inquiry:** The student will incorporate a spirit of inquiry through the utilization of current best evidence to make clinical judgements for quality improvement.
- **Communication, Teamwork and Collaboration/Professional Identity:** The student will utilize effective communication with nursing and inter-professional teams, fostering an open communication, respect, and shared decision making.
- **Safety, Informatics and Technology/Nursing Judgement:** The Students will integrate informatics and technology to guide nursing judgement in making clinical decisions that minimize the risk of harm to patients and providers.

### Technical Standards

Specific attributes, characteristics, and abilities are essential to practice nursing. Professional competency is the summation of many cognitive, affective, and psychomotor skills. Students who enter the nursing program must be able to perform (with or without reasonable accommodations) these Technical Standards, which can be found within the application for the RN programs as well as the information pages for the RN program.

Students who may require accommodations to perform the technical standards should contact the College's Office of Accessibility Services to request reasonable accommodations.

Students are asked to sign a form certifying that they have read, understand, and are able to perform the Technical Standards of the Student Nurse when applying to the program. These Technical Standards are also reviewed at the program orientation session. Attendance at this session is required for all students who have been accepted to start the nursing program's technical courses.  
**Admissions Requirements:**

- The Advanced Standing Registered Nursing (RN) program is a space limited program that admits students in the summer. In addition to applying to the college, students must apply to the program. Minimum grade point average requirements and application to the program does not guarantee admission to the program. Entry to the nursing program is competitive and based on academic achievements. All general education requirements must be completed prior to

entry please see the [Advanced Standing RN admission criteria and procedures](#).

### Additional Program Requirements

Prior to starting the program, students must have current healthcare provider cardiopulmonary resuscitation (CPR/BLS) certification and current state-tested nurse aide credentials or have satisfactorily completed MST 1181 or its equivalent at a community college within the past two years. Additional information about these requirements may be obtained from academic and faculty advisors. Students must also meet health requirements, show proof of health insurance, and meet criminal background check and drug screen requirements before starting the program.

Students must update health requirements, criminal background checks, and drug screens in accordance with program and clinical agency policies. Additional information about these requirements is provided at the nursing program orientation sessions that are required for all students who have been accepted to start the program. Students must complete these requirements at their own expense. Students will be billed for liability insurance for each year of clinical courses as part of a course fee.

All students enrolled in NUR 2239 are required to enroll in the Virtual ATI NCLEX review and Three-Day ATI Live review. All NUR 2239 students must successfully complete the specified areas within Virtual ATI NCLEX review and Three-Day ATI Live Review for NUR 2239 course completion.

### Progression Requirements

In order to enroll in NUR 1130 and progress to subsequent nursing courses, students must have successfully completed all prerequisite courses with a grade of C or higher.

### Graduation Requirements

To qualify for an associate degree, Registered Nursing students must have a cumulative grade point average of 2.8 and have a grade of C or higher in all courses in the nursing curriculum.

### Course # Course Title Credit Hours

#### Spring

BIO 2121	Anatomy and Physiology I	4
ENG 1111	English I	3

#### Summer

BIO 2122	Anatomy and Physiology II	4
PSY 1111	Introduction to Psychology	3
NUR 1130	Basic Nursing Concepts	6.5
NUR 1121	Fundamentals of Pharmacology & Dosage-Calculation	1

#### Fall

NUR 1132	Adult Nursing I	6.5
NUR 1134	Behavioral Health Nursing	2.5
NUR 1122	Pharmacology II	1
ENG 1112	English II	3

### Spring

NUR 2234	Maternal-Newborn Nursing	2.5
NUR 2236	Adult Nursing II	6.5
- -	NUR 1123 Pharm III	1
PSY 2223	Lifespan Human Growth and Development	3

### Summer

BIO 1131	Microbiology	3
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### Fall

STT 2640	Elementary Statistics I	3
NUR 2232	Children-Family Nursing	2.5
NUR 2239	Adult Nursing III	8
- -	NUR Capstone	1
	Total Credit Hours	65

BIO 2121 and BIO 2122, or the equivalent must be successfully completed within five years of entry into the first clinical nursing course

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory requirements. Many individuals, especially part-time students and those taking college preparatory education courses, will require additional semesters of study.

Students should consult their academic advisors for help in planning their schedules.



## Advanced Standing Registered Nursing - LPN to RN Transition

The Advanced Standing LPN to RN Program provides as fast track for nurses in as little as 13 months. This fast track LPN to RN program option meets the educational needs of the licensed practical nurse wanting to become a registered nurse.

Graduates are prepared to function in beginning staff-level registered nurse positions in hospitals, extended care facilities, clinics, and comparable health care facilities as members of a health care team.

### Technical Standards

Specific attributes, characteristics and abilities are essential to practice nursing. Professional competency is the summation of many cognitive, affective, and psychomotor skills. Students who enter the nursing program must be able to perform (with or without reasonable accommodations) these Technical Standards, which may be found within the application for the RN program as well as the information page for the RN program.

Students who may require accommodations to perform the technical standards should contact the College's Office of Accessibility Services to request reasonable accommodations.

Students are asked to sign a form certifying that they have read, understand, and are able to perform the Technical Standards of the Student Nurse when applying to the program. These Technical Standards are also reviewed at the program orientation session. Attendance at this session is required for all students who have been accepted to start the nursing program's technical courses.

### Licensure

Upon completion of the program, the graduate is eligible to apply to take the NCLEX-RN examination. Licensure is mandatory for practice as a RN. Candidates for licensure in Ohio must complete a criminal background check and disclose information related to any prior felony or misdemeanor, crime involving gross immorality or moral turpitude, violation of a drug law, and/or recent diagnosis or treatment of a psychotic disorder. The Ohio Board of Nursing will determine whether the candidate may take the licensing exam.

### Student Achievement Data

The nursing program publishes student achievement data that is required by the Accreditation Commission for Education in Nursing (ACEN). The data includes the graduates' success on the licensure examination, program completion rates, and employment rates.

**Licensure Examination Pass Rate** - Performance on the licensure examination for first-time test-takers  
Fall 2022 and Spring 2023 first-time test-takers from all cohorts (RN, LPN to RN, and Paramedic to RN)  
Fall 2022 Graduates- 80.00%  
Spring 2023 Graduates- 95.65

**Program Completion Rate** - Percentage of students who graduate within a defined period of time. The definition used by ACEN for the program completion rate is the number of students who complete the program in no

more than 150% of the stated program length beginning with enrollment in the first nursing course.  
2022 fall and 2022 spring All cohorts (RN, LPN to RN, and Paramedic to RN) = 75%

**Job Placement Rate** - Percentage of graduates, responding to a graduate survey, who were employed in a position for which the program prepared them six (6) to twelve (12) months after graduating.  
2022 fall and 2022 spring rates for all graduates (RN, LPN to RN, and Paramedic to RN) =100%

### Bachelor of Science in Nursing (BSN) Completion Options

Graduates of the Associate of Applied Science degree in Nursing are prepared to obtain licensure and employment as a registered nurse. Graduates are also prepared to continue their education and obtain a bachelor's degree in nursing. A number of colleges and universities have designed bachelor's nursing completion programs for associate degree prepared registered nurses. To investigate these programs affiliated with Clark State, please use the following link to take you to Clark State's transfer guides. [go.clarkstate.edu/transfer-guides/](https://go.clarkstate.edu/transfer-guides/)

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Registered Nursing, a graduate will be able to:

- **Patient Centered Care/Human Flourishing:** The student will engage in professional nursing practice, providing holistic, individualized, compassionate care that is patient centered and culturally and developmentally appropriate across the lifespan.
- **Evidence Based Practice and Quality Improvement/ Spirit of Inquiry:** The student will incorporate a spirit of inquiry through the utilization of current best evidence to make clinical judgements for quality improvement.
- **Safety, Informatics and Technology/Nursing Judgement:** The Students will integrate informatics and technology to guide nursing judgement in making clinical decisions that minimize the risk of harm to patients and providers.
- **Leadership and Professionalism/Professional Identity:** The student will transition to the role of the professional nurse, incorporating legal, ethical, and professional standards.
- **Communication, Teamwork and Collaboration/ Professional Identity:** The student will utilize effective communication with nursing and inter-professional teams, fostering an open communication, respect, and shared decision making.

### Admission Requirements

The Advanced standing LPN to RN program is a space limited program that admits students once a year in the summer. In addition to applying to the college, students must apply to the program. Minimum grade point average, requirements must be met prior to applying to the program.. Completion of the minimum requirements and application to the program does not guarantee admission. Entry to the Advanced Standing LPN to RN program is competitive and based on academic achievements. All general education requirements must be completed prior to entry please see the Advanced Standing LPN to RN admission criteria and procedures.

### Additional Program Requirements

Prior to starting the program, students must have current healthcare provider cardiopulmonary resuscitation (CPR/BLS) certification. Students must also meet health requirements, show proof of health insurance, meet criminal background check, and drug screen requirements before starting the program.

Students must update health requirements, criminal background checks, and drug screens in accordance with program and clinical agency policies. Additional information about these requirements is provided at the nursing program orientation sessions that are required for all students who have been accepted to start the program. Students must complete these requirements at their own expense. Students will be billed for liability insurance for each year of clinical courses as part of a course fee.

All students enrolled in NUR 2239 are required to enroll in the Virtual ATI review and Three Day ATI Live Review. All NUR 2239 students must successfully complete the specified areas within Virtual ATI NCLEX review for NUR 2239 course completion.

### Progression Requirements

In order to progress to the next nursing course, students must have successfully completed all prerequisite courses with a grade of C or higher.

### Graduation Requirements

To qualify for an associate degree, LPN to RN Transition students must have a cumulative grade point average (GPA) of 2.8 and have a grade of C or higher in all courses in the nursing curriculum.

Course #	Course Title	Credit Hours
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#### Fall

BIO 1131	Microbiology	3
BIO 2121	Anatomy and Physiology I	4
ENG 1111	English I	3
PSY 1111	Introduction to Psychology	3

#### Spring

BIO 2122	Anatomy and Physiology II	4
ENG 1112	English II	3
NUR 1121	Fundamentals of Pharmacology & Dosage-Calculations	1

#### Summer

NUR 1122	Pharmacology II	1
NUR 1134	Behavioral Health Nursing	2.5
NUR 1135	LPN to RN Transition	3
NUR 1136	Adult Nursing for LPNs	2
NUR -	Articulated credit awarded**	8

#### Fall

PSY 2223	Lifespan Human Growth and Development	3
NUR 2234	Maternal-Newborn Nursing	2.5
NUR 2236	Adult Nursing II	6.5
- -	(Pharmacology III)	1

### Spring

STT 2640	Elementary Statistics I	3
NUR 2232	Children-Family Nursing	2.5
NUR 2239	Adult Nursing III (new curriculum item)	8
- -	NCLEX Capstone	1
	Total Credit Hours	65

\* BIO 2121 and BIO 2122, or the equivalent, must be successfully completed within five years of entry into the first clinical nursing course. If older than five years, the courses must be repeated..

\*\* Students are awarded 8 semester hours of articulated credit for advanced placement after successful completion of NUR 1135 and NUR 1136.

The curriculum is offered as a full-time day program in fall in Springfield with a summer start date.

Many non-nursing and some nursing (NUR) courses in the curriculum are available in both traditional and online/hybrid formats for Springfield cohort students. All lab sessions are conducted on campus and/or at a healthcare facility, regardless of the format.

All students should consult their academic advisors for help in planning their schedules.

## Associate of Applied Science, Health Sciences

The Associate of Applied Science in Health Sciences degree enables students interested in a healthcare career to pursue a pathway aligned with multiple healthcare specialty areas. In this major, students complete general education and other core courses, and continue with technical courses to earn certificates for employment in a variety of healthcare settings or apply for a program of interest in healthcare.

This pathway allows student interested in space-limited programs such as sonography, nursing, medical laboratory technology, or physical therapist assistant to explore healthcare as a whole before applying for the space-limited healthcare program.

Depending on the technical courses completed, students may opt to take appropriate certification or licensure exams. Among the certifications students will want to consider are medical coding, electrocardiography, phlebotomy, Emergency Medical Technician (EMT), and medical assisting. Students are encouraged to discuss their choice of technical courses with an advisor to best ensure readiness for employment.

### Embedded Certificate

Embedded in the curriculum is the Nurse Aide Short-Term Technical (STNA) Certificate which introduces students to the principles and procedures of basic patient care. This course is regulated by the Ohio Department of Health and requires students to complete specific health requirements and a criminal background check at their own expense. Students will be prepared for entry level employment in long-term care, home health care, hospice, hospital settings, and many free standing clinics. Students will also receive a certificate of completion, allowing them to take the Ohio Nurse Aide state test. After passing both the written and skills components of the exam, the students will be placed on the Ohio Nurse Aide Registry and are ready for employment.

### Learning Outcomes

- Utilize effective written and oral communication in a variety of contexts and formats as applicable to healthcare settings.
- Demonstrate knowledge of healthcare delivery systems and healthcare occupations.
- Communicate using correct medical terminology.
- Demonstrate knowledge of basic pharmacology.
- Demonstrate knowledge of basic nutrition.
- Describe the structure and function of the major human body systems.
- Demonstrate proficiency in technical skills applicable to healthcare settings.

### Graduation Requirements

To qualify for an associate degree, a student must pass all the required courses, have a cumulative grade point average (GPA) of 2.0, and must have a C as a minimum grade in all the technical courses of the program

Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 1110	Basic Human Nutrition	2
ENG 1111	English I	3
FYE 1101	College Success	1
PSY 1111	Introduction to Psychology	3
EMS 1171	Basic Life Support: CPR	0.5
MST 1101	Introduction to Health Care	3
<b>Spring</b>		
STT 2640	Elementary Statistics I	3
ENG 1112	English II	3
BIO 1105	Fundamentals of Anatomy and Physiology	3
PSY 2223	Lifespan Human Growth and Development	3
<b>Summer</b>		
MST 1181	Nurse Aide Training	4
COM 1110	Interpersonal Communication I	3
<b>Fall</b>		
SOC 1110	Introduction to Sociology	3
CHM 1150	Introduction to General Chemistry	or
PHY 1100	Fundamentals of Physics	4
MST 1105	Medical Terminology	2
NUR 1121	Fundamentals of Pharmacology & Dosage- Calculation	1
PHL 2300	Medical Ethics	3
<b>Spring</b>		
- -	Technical Electives*	15.5
	Total Credit Hours	60

\*Choose from MST 1160, MST 1161, MST 1171, MLT 1120, MLT 1125, PTA 1112, EMS 1100, SWK 1105, SWK 2205, SWK 2215, OAD 2301, OAD 2302, OAD 2320, ACC 1000, ACC 1100, MGT 1060, MGT 1115, MGT 1120, and EBE 1100.

## Associate of Arts - Healthcare Concentration Transfer

The Associate of Arts (AA) Healthcare concentration is designed for individuals desiring to transfer to a four-year institution to complete a Bachelor's degree in a healthcare field. Four-year institutions generally require that students spend a significant portion of their first two years taking courses that build their knowledge and skills in general education. An AA degree focuses on general education courses and a minimum of 44 credit hours must come from areas 1-6 listed in the Associate of Arts section of the catalog. This AA degree is structured to include those general education courses that are commonly included in many bachelor's degree healthcare programs. The remaining credit hours are divided among the College Success course, courses in the student's area of concentration, elective courses, and the Critical Thinking course. All students must take the College Success course and Critical Thinking course in order to complete the AA degree.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in a Healthcare Concentration, a graduate will be able to:

- Demonstrate knowledge of healthcare language, delivery systems, and occupations.
- Demonstrate familiarity with the ethical and professional behaviors required in healthcare occupations.
- Describe the structure and function of the major systems of the human body

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult his/her academic advisor and the intended transfer institution when planning a schedule of classes.

Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 1410	Fundamentals of Biology *	4
ENG 1111	English I	3
FYE 1101	College Success	1
MST 1101	Introduction to Health Care	3
MST 1105	Medical Terminology	2
<b>Spring</b>		
BIO 2121	Anatomy and Physiology I	4
COM 1110	Interpersonal Communication I	or
COM 1120	Public Speaking I	or
COM 1170	Small Group Communication	3
ENG 1112	English II	3
PSY 1111	Introduction to Psychology (GA)	3
ENG -	English Literature Elective (GA)**	3
<b>Fall</b>		
BIO 2122	Anatomy and Physiology II	4
PSY 2223	Lifespan Human Growth and Development	3

SOC 1110	Introduction to Sociology (GA)	3
- -	Arts/Humanities Elective^	3
MTH -	Mathematics Elective ***	3

### Spring

PHL 2100	Ethics (GA)	or
PHL 2300	Medical Ethics (GA)	3
- -	Arts/Humanities Elective^	3
- -	Arts/Humanities Elective^	3
- -	Concentration/Elective^^	3
PHL 2000	Critical Thinking	3
Total Credit Hours		60

\*Students must complete two science courses (8 credit hours) with a lab component to meet the Associate of Arts degree requirements. Students who have not completed chemistry and biology in high school with a grade of C or better within the past five years must also take BIO 1410 to meet prerequisite requirement of BIO 2121, Anatomy and Physiology I. Students who have completed chemistry and biology in high school, may substitute 4 credit hours of concentration/general education electives for BIO 1410.

\*\*Choose from ENG 1600, ENG 2300, and ENG 2610 to meet the ENG literature GA elective requirement.

\*\*\*Students must complete 3 credit hours of math from those listed under mathematics in the transfer module. OT36 math courses include MTH 1070, 1280, 1340, 2100, 2200, 2220, 2242, 2330, 2530; STT 2640, 2650. If students choose Statistics to meet the math requirement, they must complete both STT 2640 and STT 2650.

^Three classes (9 credit hours) of Arts/Humanities electives must be completed. Choose from ART 1300, 1001, 1002; MUS 1130; THE 1130, 1133, 2241, 2242; SPN 1111, 1112, 2111, 2112; any HST; any PHL; or ENG 1600, 2250, 2300, 2510, 2520, 2610, 2620 for Arts/Humanities class.

^^ These classes should be clearly transferable and count toward the major at the transfer institution. Courses should relate to the major to be pursued or may be used to fulfill additional requirements at the four-year institution. Courses should be carefully planned with an academic advisor.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory requirements, will require additional semesters of study.

Individuals completing the curriculum will satisfy the College's AA degree requirements and many of the general education courses required for transfer to a four-year healthcare program. In addition, individuals will complete several courses that focus on healthcare which are especially helpful to those students interested in a career in healthcare.

NOTE: In recognition of the growing importance of global awareness, the College also requires that students receiving the Associate of Arts degree take at least four courses with significant international content. Courses in the curriculum plan above that meet this requirement are identified with the "GA" designation behind the course name.

In addition to PHL 2000, Critical Thinking, all students pursuing the AA degree are required to complete at least 6 credit hours in courses numbered 2000 or higher. The curriculum plan above meets this requirement.

## Associate of Science - Healthcare Concentration Transfer

The Associate of Science (AS) Healthcare concentration is designed for individuals desiring to transfer to a four-year institution to complete a bachelor's degree in a healthcare field. Four-year institutions generally require that students spend a significant portion of their first two years taking courses that build their knowledge and skills in general education. An AS degree focuses on general education courses and a minimum of 40 credit hours must come from areas 1-6 listed in the Associate of Science section of the catalog. This AS degree is structured to include those general education courses that are commonly included in many bachelor's degree healthcare programs. The remaining credit hours are divided among the College Success course, courses in the student's area of concentration, and elective courses. All students must take the College Success course in order to complete the AS degree.

Individuals completing the curriculum that follows will satisfy the College's AS degree requirements and many of the general education courses required for transfer to a four-year healthcare program. In addition, individuals will complete several courses that focus on healthcare and will prove to be especially helpful to those students interested in a career in healthcare.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Science degree in Healthcare Concentration, a graduate will be able to:

- Demonstrate knowledge of healthcare language, delivery systems, and occupations.
- Demonstrate familiarity with the ethical and professional behaviors required in healthcare occupations.
- Describe the structure and function of the major systems of the human body

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. Students should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 1410	Fundamentals of Biology *	4
ENG 1111	English I	3
FYE 1101	College Success	1
MST 1101	Introduction to Health Care	3
MST 1105	Medical Terminology	2
<b>Spring</b>		
BIO 2121	Anatomy and Physiology I	4
COM 1110	Interpersonal Communication I	or
COM 1120	Public Speaking I	or

COM 1170	Small Group Communication	3
ENG 1112	English II	3
ENG -	English Literature Elective (GA)**	3
PSY 1111	Introduction to Psychology (GA)	3

### Fall

BIO 2122	Anatomy and Physiology II	4
PSY 2223	Lifespan Human Growth and Development	3
SOC 1110	Introduction to Sociology (GA)	3
- -	Arts/Humanities elective^	3
MTH -	Mathematics Elective***	3

### Spring

MTH -	Mathematics Elective***	2
PHL 2100	Ethics (GA)	or
PHL 2300	Medical Ethics (GA)	3
- -	Concentration/elective^^	3
- -	Concentration/elective^^	3
- -	Concentration/elective^^	4
Total Credit Hours		60

\*Students must complete 8 credit hours of science classes with a lab component to meet the Associate of Science degree requirements. Students who have not completed chemistry and biology in high school with a grade of C or better within the past five years must take BIO 1410 to meet prerequisite requirement of BIO 2121, Anatomy and Physiology I. Students who have completed chemistry and biology in high school, may substitute four credit hours of concentration/general education electives for BIO 1410.

\*\*Choose from ENG 1600, ENG 2300, and ENG 2610 to meet the ENG literature GA elective requirement.

\*\*\*Students must complete five credit hours of math from those listed under mathematics in the transfer module. OT36 math courses include MTH 1070, 1280, 1340, 2100, 2200, 2220, 2242, 2430, 2530; STT 2640, 2650. If students choose Statistics to meet the math requirement, they must complete both STT 2640 and STT 2650.

^Choose from ART 1300, 1001, 1002; MUS 1130; THE 1130, 1133, 2241, 2242; SPN 1111, 1112, 2111, 2112; any HST; any PHL; or ENG 1600, 2250, 2300, 2510, 2520, 2610, 2620 for Arts/Humanities class.

^^These hours should be clearly transferable and count toward the major at the transfer institution. Courses should relate to the major to be pursued or may be used to fulfill additional requirements at the four-year institution. Courses should be carefully planned with an academic advisor.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory requirements, will require additional semesters of study.

NOTE: In recognition of the growing importance of global awareness, the College also requires that students receiving the Associate of Science degree take at least four courses with significant international content. Courses in the curriculum plan above that meet this requirement are identified with the "GA" designation behind the course name.

All students pursuing the AS degree are required to complete at least 9 credit hours in courses numbered 2000 or higher. The curriculum plan above meets this requirement.



## Diagnostic Medical Sonography

Diagnostic Medical Sonography (DMS) is the non-invasive use of high frequency sound waves to image anatomic structures within the body. Sonographers are specially trained individuals who work under the close supervision of radiologists, cardiologists, and vascular surgeons in order to assist them in determining a medical diagnosis and treatment plan for patients. The sonographer is responsible for acquiring diagnostic images of normal and abnormal structures and reporting findings to the appropriate supervising physician. Upon graduation, sonographers may be employed by hospitals, private physician practices, diagnostic imaging centers, research departments, and ultrasound machine manufacturers. The Diagnostic Medical Sonography program combines didactic and clinical learning experiences that are within the legal scope of responsibility of sonographers. The Diagnostic Medical Sonography Program at Clark State accepts a limited number of students per year with technical classes beginning each fall.

The DMS program at Clark State College is a competitive, space limited program. If there are more applicants than available spots, students will be offered a seat based on the qualifying criteria (aggregate of calculated GPA in the required curriculum, the number of general education courses completed at Clark State College, and points for successfully submitting the required documents found below). If the qualifying criteria aggregate score of two applicants is equal, the calculated GPA in the required courses will be used to rank those applicants.

The application deadline for any given year is the first Friday in February. All application materials must be received on or before the deadline. Any application materials received after this date will not be considered. In addition, the Admissions Committee must be able to verify that the applicant has made application to Clark State and that official transcripts from other institutions have been received by the deadline when possible. Transfer students should submit their Clark State applications and official transcripts early to avoid this problem. Notification of acceptance into the program will occur after spring semester has ended. Once accepted, the student must maintain the required GPA.

### Program Mission

In accordance with the mission of Clark State College, the mission of the Diagnostic Medical Sonography program is to educate students in the technical and procedural abilities in diagnostic medical sonography in order to serve a diverse patient population as competent, safe and professional entry-level general and vascular sonographers.

### Program Goal

The primary goal of the Diagnostic Medical Sonography (DMS) Program is to prepare competent entry-level sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for the following concentrations.

- Abdominal-Extended Sonography
- Obstetrics & Gynecology Sonography
- Vascular Sonography
- Technical Standards

All applicants accepted into the Diagnostic Medical Sonography program must be able to meet the essential functions, skills, and abilities required to provide safe patient practice with or without reasonable accommodations.

The essential functions, skills, and abilities may be found in the DMS Technical Standards. Applicants are required to sign a form, found here indicating they have reviewed these essential functions, skills, and abilities and submit that form as part of the program application process. The required form must be completed and returned to the Diagnostic Medical Sonography program at [DMSprogram@clarkstate.edu](mailto:DMSprogram@clarkstate.edu).

In addition to completing the standard procedures for admission to the College, students must apply to the DMS program separately. Students must be 18 years or older for admission into the DMS program.

Students must have completed or be enrolled in courses in spring semester of the application year to complete the following academic requirements and be eligible to apply to the Diagnostic Medical Sonography Program:

- A grade of C or higher in a college level physics course (PHY 1100 Fundamentals of Physics or its equivalent within five years of beginning DMS coursework).
- A grade of C or higher in a college level composition course (ENG 1111 English I or its equivalent).
- A grade of C or higher in a college level Anatomy and Physiology course (BIO 2121 Anatomy and Physiology I or its equivalent within five years of beginning DMS coursework).
- A grade of C or higher in a college level mathematics course (STT 2640 Elementary Statistics I or its equivalent within five years of beginning DMS coursework).
- A combined GPA of 2.5 in the above required curricular courses.

In order to be accepted into the Diagnostic Medical Sonography courses, students must maintain the required cumulative grade point average in the required courses in the curriculum.

At Clark State, progression in healthcare programs requires course grades of C or higher.

In addition to the academic requirements above, students are required to choose one of the following to be completed prior to application submission:

### Option 1: Observation hours

Complete between 4-6 hours of observation in a hospital-based sonography department. Observation must be documented on the student observation form, found here. The completed form must be scanned and emailed to [DMSprogram@clarkstate.edu](mailto:DMSprogram@clarkstate.edu) prior to admission into the program.

### Option 2: Interview with a healthcare worker

Students are required to interview a healthcare worker using the student interview form, found here. The healthcare worker does not need to be a sonographer, but interviewing a sonographer is recommended. The completed form must be emailed to [DMSprogram@clarkstate.edu](mailto:DMSprogram@clarkstate.edu) prior to admission into the program.

### Liability Insurance

Students will be billed for liability insurance for the academic year of clinical coursework.

### Degree Availability

DMS courses are composed of traditional lecture, online courses, and hands-on skills labs. Technical courses will be offered either onsite on campus or online. Clinical rotations are off-site in clinical facilities throughout Ohio including the greater Springfield, Dayton, Columbus, Cincinnati, and Lima Regions.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Diagnostic Medical Sonography, a graduate will be able to:

- Practice sonography while demonstrating professional, caring, and empathetic behaviors.
- Correlate clinical signs and symptoms with pathology.
- Identify, describe, interpret, and apply the basic concepts of Sonographic Physics and Instrumentation.
- Practice sonography in an ethical manner in alignment with organizational policies and procedures.
- Demonstrate competency in abdominal, gynecological, obstetrical and vascular sonographic imaging.
- Apply critical thinking to real patient scenarios and choose an appropriate course of action.

### Graduation Requirements

A 2.0 cumulative grade point average (GPA) on a 4.0 scale and grades of C or higher in the major courses in the DMS curriculum are required to graduate.

### Clinical Requirements

Prior to beginning DMS courses, a physical exam, a two-step Mantoux test, Hepatitis B immunization or waiver, a health history including record of childhood immunizations or adult titers, a flu shot, and professional CPR are required. A criminal records check must be completed within the three months immediately prior to entry into DMS coursework. A federal (FBI) and drug screening will be required. Additional medical tests and other requirements may be necessary depending on clinical site requirements.

Course #	Course Title	Credit Hours
<b>Spring</b>		
BIO 2121	Anatomy and Physiology I	4
FYE 1101	College Success	1
STT 2640	Elementary Statistics I	3
PHY 1100	Fundamentals of Physics	4
ENG 1111	English I	3

### Fall

BIO 2122	Anatomy and Physiology II	4
PSY 1111	Introduction to Psychology	3
DMS 1110	Principles of Sonography *	3
DMS 1120	Abdominal Sonography I *	3
DMS 1150	Vascular Sonography *	3

### Spring

DMS 1130	Obstetrical and Gynecological Sonography *	3
DMS 1140	Clinical Sonography I *	4
DMS 2210	Physics & Instrumentation I *	3
MST 1101	Introduction to Health Care	3
DMS 2241	Abdominal Sonography II *	2

### Summer

DMS 2220	Clinical Sonography II *	4
MST 1105	Medical Terminology ***	2
DMS 2250	Obstetrical and Gynecological Sonography II *	2

### Fall

DMS 2261	Sonography Registry Review *	3
DMS 2270	Clinical Sonography III *	4
ENG 1112	English II	3
DMS 2291	Sonography Capstone *	1
Total Credit Hours		65

\*Students must be accepted into the technical phase of the program to take classes that are starred. The following prerequisite courses: STT 2640, BIO 2121, and PHY 1100 must be successfully completed with a grade of C or higher within five years of beginning DMS technical courses.

\*\*MST 1101 must be successfully completed with a grade of C or higher within five years of beginning DMS technical courses or while enrolled in the DMS program. If older than five years, the course must be repeated.

\*\*\*MST 1105 must be successfully completed with a grade of C or higher within five years of beginning DMS technical courses or while enrolled in the DMS program. If older than five years, the course must be repeated.

The program schedule is designed for full-time students who have completed all pre-requisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students who plan to continue to work are strongly encouraged to complete all or most non-core DMS courses prior to starting the technical phase of the program. Students should consult an Academic Advisor or the Program Coordinator for help in planning their schedules.

## Medical Assisting

Medical assistants perform clinical and administrative tasks in physicians and other health practitioners' offices and outpatient facilities. Specific duties vary from office to office depending on the location and size of the practice and the practitioner's specialty. Administrative duties include answering telephones, greeting patients, scheduling appointments and laboratory services, updating and filing patients' medical records, filling out insurance forms, and handling billing and bookkeeping. Clinical duties include taking medical histories and recording vital signs, explaining procedures to patients, preparing patients for and assisting the physician during examinations, collecting and preparing laboratory specimens, sterilizing medical instruments, instructing patients on medications and special diets, preparing and administering medications as directed by a physician, drawing blood, taking electrocardiograms, removing sutures, and changing dressings.

The primary goal of the Medical Assisting program is to prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Students who complete the first year of this associate degree program have completed the course work for and should therefore submit a petition to graduate from the certificate program. Completion of the certificate provides the student with the administrative and clinical skills needed for entry-level positions as a medical assistant.

### Embedded Certificates

This certificate program contains one or more embedded certificates, which will automatically be awarded if the degree requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Technical Standards & Occupational Risks

All students accepted into the Medical Assisting program must be able to perform the essential functions of the medical assistant with or without reasonable accommodations, as well as be aware of the occupational risks associated with the medical assisting profession. The essential functions and occupational risks are linked to this program page on the College's website and are also provided to students via the Medical Assisting Student Handbook. Students are required to sign a form indicating they have reviewed these requirements and submit it to the Medical Assisting Program Coordinator when they enter the program.

### Accreditation

The Clark State Medical Assistant associate degree curriculum includes a certificate program, the Medical Assistant Certificate. The certificate, not the degree, is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs/9355 113th Street North, #7709/Seminole, FL 33775/Telephone: 727-210-2350 Graduates of the Medical Assistant Certificate program meet the eligibility criteria to apply for the national certification process through the American Association of Medical Assistants or another nationally recognized certification credential.

### Learning Outcomes

Upon completion of an associate degree in Medical Assisting, a graduate will demonstrate achievement of:

- Communicate effectively with patients, families, and members of the health care team.
- Perform clerical functions necessary to maintain medical office appointments, transcription, and medical records.
- Apply basic billing, collection, insurance, coding, and manage care guidelines needed to maintain office bookkeeping.
- Collect, transport, and process specimens.
- Obtain vital signs
- Perform, assist, and follow-up on diagnostic tests and procedures.
- Instruct patients regarding health maintenance and disease prevention.
- Apply legal and ethical concepts.

### Graduation Requirements

Students must petition online (apply) for admission to the program. To be eligible to petition to the Medical Assisting program, students must have:

**Reading:** Appropriate score on reading placement test (ACCUPLACER, ACT, or SAT) or completion of ENG 0980 with a grade of C or higher. Students are excused from reading placement tests if they have obtained a C or better in a college-level English composition course or an appropriate recent high school senior English grade in accordance with College policy.

**Writing:** Appropriate score on writing placement test (ACCUPLACER, ACT, or SAT) or completion of ENG 0980 with a grade of C or higher. Students are excused from writing placement tests if they have obtained a C or higher in a college-level English composition course or an appropriate recent high school senior English grade in accordance with College policy.

**Math:** Appropriate scores on math/algebra placement tests (ACCUPLACER, ACT, or SAT) or completion of MTH 0500 with a grade of C or higher within the past ten years. Students are excused from math/algebra placement tests if they have obtained a C or better in a college-level math course within the past ten years or an appropriate recent high school Algebra II grade in accordance with college policy.

**Grade point average (GPA):** A minimum cumulative Clark State transcript GPA of 2.0 (college preparatory courses are not included in the transcript GPA) as well as a minimum GPA of 2.0 in the courses in the Medical Assisting curriculum.

Students who have met the petition requirements and submitted a petition are eligible to start the Medical Assisting program's technical (MAS) course sequence. Students must contact the Medical Assisting program coordinator for academic advising and approval to enroll in the MAS courses. Students must maintain an overall C or 2.0 grade point average (GPA) for the courses in the Medical Assisting curriculum in order to be enrolled in MAS courses.

In order to progress through the program, students must maintain an overall GPA of 2.0 and a grade of C or better in BIO 1105 and all MAS and MST courses. Admitted students who drop out must complete and submit a request for reinstatement into the MAS courses. Students must have an overall GPA of 2.0 and may be required to retake technical courses that are more than one to two years old to be considered for reinstatement.

### Health and Directed Practice Requirements

All Medical Assisting associate degree and certificate students will complete 200 hours of directed practice at the end of the first year of the degree program or end of the certificate program. The directed practice course hours are only available during the daytime hours.

All Medical Assisting students must meet health requirements, obtain a criminal background check, and have current Basic Life Support (BLS)/professional cardiopulmonary resuscitation (CPR) certification prior to entering the directed practice course. Other requirements may be necessary depending on clinical site placement.

### Liability Insurance

Students will be billed for liability insurance for the directed practice courses.

### Graduation Requirements

Student must pass all the required courses, have a Clark State cumulative transcript grade point average (GPA) of 2.0 (college preparatory courses are not included) and have a C as a minimum grade in BIO 1105 and all MAS and MST courses.

Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 1105	Fundamentals of Anatomy and Physiology	3
FYE 1101	College Success	1
MAS 1101	Introduction to Administrative and Clinical Medical Assisting	4
MST 1101	Introduction to Health Care	3
MST 1105	Medical Terminology	2
MST 1160	Phlebotomy	2
MST 1161	Phlebotomy Lab	1
<b>Spring</b>		
ENG 1111	English I	3
MAS 1105	Administrative Medical Assisting II	3
MAS 1106	Clinical Medical Assisting II	3
MAS 1115	Laboratory Procedures for the Medical Office	2
MAS 1112	Pharmacology for the Medical Office	3
MST 1171	Introduction to Electrocardiography	2
<b>Summer</b>		
PSY 1111	Introduction to Psychology	3
MAS 1117	Medical Assisting Directed Practice	2
MAS 1118	Clinical Perspectives Seminar	1
MAS 2100	Medical Assisting Certification Review	2
<b>Fall</b>		
ITS 1105	Computer Concepts and Software Applications	3
PSY 2223	Lifespan Human Growth and Development	3
SOC 1110	Introduction to Sociology	3
- -	Technical Elective*	3

BIO 1105	Fundamentals of Anatomy and Physiology	3
FYE 1101	College Success	1
MAS 1101	Introduction to Administrative and Clinical Medical Assisting	4
MST 1101	Introduction to Health Care	3
MST 1105	Medical Terminology	2
MST 1160	Phlebotomy	2
MST 1161	Phlebotomy Lab	1

ENG 1111	English I	3
MAS 1105	Administrative Medical Assisting II	3
MAS 1106	Clinical Medical Assisting II	3
MAS 1115	Laboratory Procedures for the Medical Office	2
MAS 1112	Pharmacology for the Medical Office	3
MST 1171	Introduction to Electrocardiography	2

PSY 1111	Introduction to Psychology	3
MAS 1117	Medical Assisting Directed Practice	2
MAS 1118	Clinical Perspectives Seminar	1
MAS 2100	Medical Assisting Certification Review	2

ITS 1105	Computer Concepts and Software Applications	3
PSY 2223	Lifespan Human Growth and Development	3
SOC 1110	Introduction to Sociology	3
- -	Technical Elective*	3

### Spring

COM 1110	Interpersonal Communication I	3
MTH 1060	Business Mathematics	3
MST 1140	Human Disease	3
- -	Technical Elective*	3
	<b>Total Credit Hours</b>	<b>64</b>

\* Please choose from the following courses to meet the Technical Elective requirement.

BIO 1110	Basic Human Nutrition (2)
MGT 1060	Organizational Behavior (3)
MGT 1120	Principles of Management (3)
OAD 2301	CPT/ICD -10-PCS Coding (3)
OAD 2302	ICD-10-CM Coding (3)
SWK 1105	Chemical Dependency I (3)
SWK 2205	Chemical Dependency II (3)
SWK 2215	Chemical Dependency III (3)

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory requirements, will require additional semesters of study. In addition to the day program, offered at both the Springfield (fall semester start) and the Xenia (spring semester start) campuses, the Medical Assisting program is offered as a part-time evening option, at the Springfield campus, with the MAS courses for this option starting in spring term (January). Part-time evening students will still need to complete their unpaid, supervised Directed Practice clinical hours during the day. Students should consult their academic advisors for help in planning their schedules.



## Medical Laboratory Technology

Medical laboratory technicians are a vital part of the health care process, providing information for patient diagnosis and treatment by performing laboratory tests in areas such as toxicology, chemistry, hematology, immunology and microbiology. Two-year associate degree programs with supervised clinical experience in approved laboratories provide the opportunity to enter this challenging, ever-changing career.

### Program Mission Statement

To prepare and develop skilled entry-level Medical Laboratory Technicians who utilize critical thought process during technical application and display professional behaviors in various clinical environments while meeting the needs of the industry partners.

### Technical Standards

MLT students should possess (with or without reasonable accommodations) appropriate visual, motor, cognitive, technical, communication, and affective skills to be able to accurately and safely perform, plan, prioritize, analyze, solve, and interpret patient's tests and other biological specimens. The National Accrediting Agency for Clinical Laboratory Science (NAACLS) has identified minimum essential functions. These are provided to students as they enter the MLT courses. Students are asked to sign a form certifying that they have read, understand, and possess the skills required to meet the essential functions of an MLT.

### Course Format

Each MLT course is composed of two required components, an online lecture component and an in-class lab component. Off campus lab sites for distance students must be secured by the student and approved by the MLT program director prior to entry into the program. One suitable directed practice site is found for each student in the program by the MLT faculty and program coordinator.

### Liability Insurance

Students will be billed for liability insurance for the directed practice course.

### Certification

Upon completion of the accredited program, graduates are eligible to take the national certifying examination. This program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), 5600 North River Road, Suite 720, Rosemont, IL 60018; telephone 773-714-8880; [www.naacls.org](http://www.naacls.org).

### Program Outcomes Measures

As a program accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), the Clark State MLT Program publishes outcomes measures for the past three years. The outcome measures include ASCP Board of Certification (BOC) Exam pass rates, graduation rates, and graduate placement rates for students entering the final half of the MLT program. The definition of these measures and the three year Clark State MLT program percentage rates for these measures are listed below. Program Outcomes are listed by Academic Year (AY) in an percentage.

- Yearly Certification Pass Percentage: 83% (AY 20-21) | 92% (AY 21-22) | 77% (AY 22-23)
- Three-year Average Certification Pass Rate Percentage: 84%

- Yearly Graduation Rate Percentage: 83% (AY 20-21) | 100% (AY 21-22) | 100% (AY 22-23)
- Three Year Average Graduation Rate Percentage: 94%
- Yearly Placement Rate Percentage: 100% (AY 20-21) | 100% (AY 21-22) | 100% (AY 22-23)
- Three Year Average Placement Rate Percentage: 100%

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Medical Laboratory, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Display professional characteristics.
- Verbally communicate clearly and accurately in a variety of contexts and formats.
- Select and use appropriate, safe, and effective tools to solve a variety of problems pertaining to collecting, handling, and conducting tests on samples and to perform corrective and preventative maintenance on instruments.
- Demonstrate ability to think critically; assessing proper correlation between the results and predetermined values; performing quality control activities; relating lab results to disease processes; drawing and defending reasonable conclusions.

### Program Admission

Entry into the program is on a space-limited basis. Students must petition for admission. To be eligible to petition, students must complete reading, writing, math, and algebra placement tests or obtain a grade of C or better on the appropriate college preparatory course(s).

Math/Algebra College-ready math/algebra skills, enabling the student to enroll in their desired college math course, may be demonstrated in one of the following ways.

1. Testing out of appropriate preparatory math level via ACT, SAT, or College's math/algebra placement testing
2. College's math placement testing was waived for:
  - a. College Ohio Transfer Module (OTM) equivalent math course with a C or better within five years
  - b. Recent high school senior algebra II courses with appropriate grades within the last five years
3. Completion of the math course(s) required to enroll in the desired college-level math course with a C or better within five years

Students who meet admission requirements and are accepted to the program must meet with the MLT Program Director before enrolling in MLT courses. The MLT Program Director or the School of Health, Human, and Public Services office in the Applied Science Center can provide a list of the MLT clinical sites and copies of the MLT student and directed practice manuals.

### Health and Clinical Requirements

All Medical Laboratory students must meet health requirements and obtain a criminal background check prior to entering the directed practice course in the last semester of the program. Other requirements may be necessary depending on clinical site placement. Specific information including when to obtain and submit proof of these requirements will be provided during the first semester of the program.



Distance students completing lab courses in clinical agencies may be required to complete health requirements prior to their first lab course.

### Graduation Requirements

To qualify for an associate degree, a Medical Laboratory student must pass all the required courses, have a cumulative grade point average (GPA) of 2.0, and must have a C as a minimum grade in all the technical courses of the program. Granting of the AAS degree is not contingent upon passing an external certifying examination.

### Transfer Options

Students enrolled in the Associate of Applied Science Medical Laboratory Technology degree program are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges/universities have designed bachelor's completion programs for students completing applied degrees. Select programs include:

- Franklin University Bachelor of Science in Allied Healthcare Management
- University of Cincinnati Bachelor of Science in Clinical Laboratory Science
- University of Arkansas for Medical Sciences/MLS Program

See the transfer section of the catalog and website and your academic advisor for more information.

### Course # Course Title Credit Hours

#### Fall

MLT 1120	Introduction to Medical Laboratory Science *	2
MLT 1125	Introduction to Medical Laboratory Science Laboratory *	1
MLT 1160	Urinalysis & Body Fluids *	2
MLT 1165	Urinalysis & Body Fluids Laboratory *	1
BIO 1105	Fundamentals of Anatomy and Physiology **	3
CHM 1150	Introduction to General Chemistry ***	4
FYE 1101	College Success	1
ITS -	ITS Elective	1

#### Spring

MLT 1130	Clinical Chemistry *	3
MLT 1135	Clinical Chemistry Lab *	2
MLT 1140	Medical Microbiology I *	2
MLT 1145	Medical Microbiology I Lab *	2
MLT 2130	Medical Microbiology II *	2
MLT 2135	Medical Microbiology II Lab *	2
ENG 1111	English I	3

#### Summer

ENG 1112	English II	3
PSY 1111	Introduction to Psychology	3

#### Fall

MLT 1150	Hematology I *	2
MLT 1155	Hematology I Laboratory *	2
MLT 2140	Hematology II *	2
MLT 2145	Hematology II Lab *	2
MLT 2122	Immunology & Blood Banking *	3
MLT 2125	Immunology & Blood Banking Lab *	4

### Spring

MLT 2156	Directed Practice /Seminar *	5
MLT 2160	MLT Review and Update	2
SOC 1110	Introduction to Sociology	3
MTH -	Math Elective****	3
	Total Credit Hours	65

\*May be taken within two years of acceptance into the program although no sooner than one year is preferred. If the course was completed more than 24 months prior to starting the program, the course will need to be repeated. Must be accepted into the MLT program to take these classes.

\*\*BIO 1105 must be successfully completed with a grade of C or higher within five years of beginning MLT courses or while enrolled in the MLT program. If older than five years, the course must be repeated. The two semester anatomy & physiology sequence BIO 2121 and BIO 2122 may be substituted for BIO 1105.

\*\*\*CHM 1150 must be successfully completed with a grade of C or higher within five years of beginning MLT courses or while enrolled in the MLT program. If older than five years, the course must be repeated. CHM 1150 must be taken in the fall semester of the first year as it is a pre-requisite to MLT 1130 & MLT 1135.

\*\*\*\*MTH or STT must be successfully completed with a grade of C or higher within five years of beginning MLT courses or while enrolled in the MLT program. If older than five years, the course must be repeated. Choose from the MTH or STT courses listed under the General Education Requirement for Technical Programs, Mathematics courses.

The program schedule is designed for full-time students who have completed all pre-requisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students who plan to continue to work are strongly encouraged to complete all or most non-core MLT courses prior to starting the program. Students should consult an Academic Advisor or the Program Coordinator for help in planning their schedules.

## Multi-Skilled Healthcare Associate of Technical Studies

The Multi-Skilled Healthcare Associate of Technical Studies degree enables a student to design an individualized program of study to fulfill a unique healthcare career goal that cannot be met through the completion of one of the College's other technical healthcare programs. Students complete core courses and select technical courses from different healthcare specialty areas.

Upon completion of this degree, students will have the skills needed to obtain employment in a variety of healthcare settings. In addition to the degree, completion of some specialty courses result in completion of healthcare certificates and may enable students to take appropriate certification or licensure exams. Courses within this program may also be taken by students in other degree or certificate programs and by healthcare professionals who wish to expand their knowledge and skills and/or increase marketability for employment.

### Embedded Certificates

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Technical Studies in Multi-skilled Healthcare, a graduate will:

- Demonstrate knowledge of healthcare delivery systems and healthcare occupations.
- Communicate using correct medical terminology.
- Demonstrate computer skills essential for today's healthcare worker.
- Describe the structures and functions of the human body
- Identify common alterations in health and appropriate measures for prevention, detection, and management.
- Demonstrate knowledge of the interpersonal, ethical, and professional behaviors required in healthcare.

### Non-Academic Requirements

- Must meet specified health requirements prior to enrolling in clinical or directed practice courses.
- Will be billed for liability insurance when registering for specified clinical or directed practice courses.
- Will be required to obtain a criminal background check prior to enrolling in specified clinical or directed practice courses. May also be required to obtain drug screen, dependent on clinical agency requirements.

Students should be aware that clinical/directed practice sites may also require:

- Random drug screening.
- HIV testing, if exposed to blood borne pathogens.
- Submission to treatment/counseling, if exposed to infectious diseases.

### Graduation Requirements

To qualify for an Associate of Technical Studies degree in Multi-Skilled Healthcare, students must pass all required courses, obtain a grade of C or better in all technical courses, and have a minimum cumulative GPA of 2.0.

Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 1105	Fundamentals of Anatomy and Physiology	3
EMS 1171	Basic Life Support: CPR	0.5
FYE 1101	College Success	1
MST 1101	Introduction to Health Care	3
MST 1105	Medical Terminology	2
- -	Technical Electives*	6
<b>Spring</b>		
ITS 1105	Computer Concepts and Software Applications	3
MST 1140	Human Disease	3
PSY 1111	Introduction to Psychology (GA)	3
- -	Technical Electives*	6
<b>Summer</b>		
COM 1110	Interpersonal Communication I	or
COM 1120	Public Speaking I	or
COM 1170	Small Group Communication	3
ENG 1111	English I	3
<b>Fall</b>		
ENG 1112	English II	or
ENG 2211	Business Communication	3
- -	Economics Elective OR	0
PSY 2223	Lifespan Human Growth and Development	3
SOC 1110	Introduction to Sociology	3
- -	Technical Electives	5
<b>Spring</b>		
MTH 1060	Business Mathematics	3
- -	Arts/Humanities Elective OR	0
SPN 1100	Survival Spanish (recommended)	3
- -	Technical Electives*	5
Total Credit Hours		61.5

\* Students must choose a total of 22 credit hours of technical elective course work from two or more of the following specialty areas. Students should verify that course prerequisites have been met prior to registering for a course.

### Diagnostic Procedures

- MST 1160 Phlebotomy (2 credits) (must also register for MST 1161)
- MST 1161 Phlebotomy Lab (1 credit) (must also register for MST 1160)
- MST 1171 Principles of Electrocardiography (2 credits)
- MLT 1120 Introduction to Medical Laboratory Science (2 credits) (must also register for MLT 1125)
- MLT 1125 Introduction to Medical Laboratory Science Laboratory (1 credit) (must also register for MLT 1120)

### Direct Patient Care

- BIO 1110 Basic Human Nutrition (2 credits)
- MST 1181 Nurse Aide Training (4 credits)
- NUR 1110 Dosage Calculation (1 credit)
- PTA 1112 PTA Survey (1 credit)

### Emergency Care

- EMS 1100 EMT Theory and Practice (7 credits)

### Chemical Dependency

- SWK 1105 Chemical Dependency I: Pharmacology/Physiology of Psychoactive Substances (3 credits)
- SWK 2205 Chemical Dependency II: Assessment, Diagnosis, and Treatment Strategies (3 credits)
- SWK 2215 Chemical Dependency III: Co-occurring Disorders of Addiction & Mental Health (3 credits)

### Medical Coding

- OAD 2301 CPT/ICD-10-PCS Coding (3 credits)
- OAD 2302 ICD-10-CM Coding (3 credits)
- OAD 2312 Advanced Medical Coding (3 credits)
- OAD 2320 Medical Office Certification Review (1 credit)

### Healthcare Management

- ACC 1000 Accounting Concepts (3 credits)
- ACC 1100 Introduction to Financial Accounting (4 credits)
- MGT 1060 Organizational Behavior (3 credits)
- MGT 1120 Principles of Management (3 credits)

### Other Technical Electives

- EBE 1000 Employability Skills (1 credit)

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses will require additional semesters of study. Students should consult their academic advisors for assistance with developing their individualized program plans prior to completing 40 credit hours towards the degree.

## Occupational Therapy Assistant (Consortium Program)

**Classes must be taken at both Clark State and Rhodes State College to complete this program.**

As a member of the Northwest Ohio Allied Health Education Consortium Clark State is able to bring an associate degree in Occupational Therapy Assistant to Clark State students. The consortium allows Clark State students to complete their general education and basic classes through Clark State at one of its campuses or online. Students are also enrolled at Rhodes State. Technical courses are taught by Rhodes State faculty through distance learning on the Clark State campus. Students will need to travel to the Rhodes State campus in Lima for skills lab instruction and hands-on practice approximately once a week. Clinical learning experiences will be scheduled in regional healthcare facilities. A very important aspect of the Occupational Therapy Assistant consortium program is that these clinical seats are reserved for qualified Clark State students living in Clark State's service area.

Information about the consortium is available at the consortium website. Specific information about the [Occupational Therapy Assistant program](#) is available on Rhodes State website.

The technical courses in the Occupational Therapy Assistant program start each year in summer semester (May). Seats for the program are filled with qualified applicants. Clark State applicants for this program must apply to Rhodes State online. Students should indicate they are applying to the Northwest Ohio Allied Health Education Consortium and that they are from Clark State by checking the appropriate boxes at the top of the application. Seats are limited so students are encouraged to submit documentation of meeting qualification requirements to Rhodes State in a timely manner. Occupational Therapy Assistants (OTAs) work with individuals of any age to develop, recover or maintain the skills needed to participate in occupation (everyday activities) with meaning, satisfaction and productivity. Under the supervision of an occupational therapist, an assistant will develop and provide therapeutic activities and strategies that will help their clients gain the cognitive, physical, emotional and/or developmental skills necessary for everyday life. They may also provide adaptive equipment or techniques necessary to carry out life tasks, provide education and consultation to individuals, families and society, and address prevention. The OTA will work with the health care team which may include physicians, nurses, physical therapists, psychologists, social workers, and speech and language pathologists, in a variety of settings including: hospitals, school systems, community mental health centers, nursing homes, home health agencies and private practice.

### Notice to Prospective or Current Occupational Therapy Assistant Students

Students who have been convicted of certain felonies and/or misdemeanor offenses are not eligible to participate in clinical education experiences. A criminal conviction may also affect ability to take the National Certification Examination for the Occupational Therapy Assistant or attain state licensure. Students admitted to a program containing off campus clinical/practicum experiences will be required to submit to drug screening.

## Qualification Requirements

Academic qualification for the Occupational Therapy Assistant program are listed below as items 1-6. These requirements must be met in order to be considered for the program. All courses must be completed with a grade of C or better.

1. Appropriate American College Test (ACT) or college placement test scores or completion of college preparatory coursework as listed below.  
Test out of college preparatory writing coursework, OR completion of ENG 0900 with a grade of C or higher.  
Test out of college preparatory reading coursework, OR completion of ENG 0850 with a grade of C or higher.  
Test out of college developmental/elementary algebra, OR completion of MTH 0650 with a grade of C or higher.  
ACT score of 20 or higher in science OR completion of high school chemistry and high school biology OR BIO 1410 with a C or higher within past five years.
2. Overall and calculated GPA of 2.75. (Calculated GPA is defined as the average GPA of program specific coursework excluding the Success course).
3. Complete and score a minimum score of 60 on the Test of Essential Academic Skills (ATI TEAS) assessment exam.
4. Attend a mandatory program orientation session at Rhodes State and sign informed consent forms.
5. Complete 40 hours of observation in a clinical setting with a licensed Occupational Therapist or Occupational Therapy Assistant.
6. Have Clark State and other college transcripts with transferable college credits for basic and general education courses sent to Rhodes State.

After qualifying, a student must maintain a 2.75 or higher GPA in order to remain on the qualified list. If the student's GPA drops below 2.75, the student will be removed from the list. To re-qualify, the student must raise the GPA to or above 2.75. The student will then be added to the qualification list based on the re-qualification date, which would be the day GPA was raised.

If there are more applicants than available spots, students will be offered a seat based on the qualifying criteria (aggregate of calculated GPA, ATI TEAS score, the number of program specific courses completed with a C or better, and the two observation rubrics). If the qualifying criteria aggregate score of two applicants is equal then the college application date will be used to rank order those applicants.

Qualified students who were not admitted due to space limitations will be admitted in a following cohort year. This acceptance is contingent upon re-application prior to the deadline of the offered cohort year to verify continued interest in pursuing the degree. These students will be encouraged to attend an informational meeting with programmatic faculty to discuss strategies for persistence within the program or opportunities for other health care majors with seats available for immediate entry and/or other career directions offered at the College. Students will have additional requirements that will have to be met before entrance into the Occupational

Therapy Assistant program. These requirements include, but are not limited to physical, immunizations, background check, drug screen, CPR certification, and meeting with the Occupational Therapy Assistant program director.

Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 2122	Anatomy and Physiology II	4
PSY 1111	Introduction to Psychology	3
--	OTA 1020 (RSC)	0
--	OTA 1030 (RSC)	2
--	OTA 1050 (RSC)	3
<b>Spring</b>		
PSY 2230	Abnormal Psychology	3
--	OTA 1060 (RSC)	2
--	OTA 1140 (RSC)	0
<b>Summer</b>		
BIO 2121	Anatomy and Physiology I	4
ENG 1111	English I	3
FYE 1101	College Success	1
--	OTA 1010 (RSC)	0
<b>Fall</b>		
MTH 1070	Quantitative Reasoning	or
STT 2640	Elementary Statistics I	3
SOC 1110	Introduction to Sociology	3
--	OTA 2140 (RSC)	3
--	OTA 2150 (RSC)	0
<b>Spring</b>		
--	OTA 2170 (RSC)	4
--	OTA 2180 (RSC)	4
--	OTA 2200 (RSC)	2
<b>Summer</b>		
MST 1105	Medical Terminology	2
--	OTA 2100 (RSC)	0
--	OTA 2130 (RSC)	4
Total Credit Hours		50

NOTE: "RSC" indicates the course is a technical course provided by Rhodes State College. Students who have been approved to start the technical courses in the program [Rhodes (RSC) OTA courses] must complete all CSC general education/basic courses no later than the term in which the course is listed in this curriculum plan.

\*These courses and all OTA courses must be completed with a grade of C or higher to continue in the program

^Clark State's ENG 1112 is the appropriate equivalent to Rhodes State's one English composition course. ENG 1111 is a pre-requisite of ENG 1112 and therefore is also listed in this curriculum plan.

^^ These courses involve full-time field work in clinical sites and must be completed no later than 18 months after completion of academic preparation.

(p)=portfolio course (c)=capstone course

## Office Administration - Medical Office Administration Major

Medical office administrators function in a wide variety of medical settings, including physicians' offices, hospitals and nursing homes. They may prepare medical records or charts, schedule appointments, handle correspondence, prepare bills, and process insurance forms. In addition to excellent keyboarding skills, medical office administrators must possess expertise in medical terminology, familiarization with medical references, knowledge of medical coding, and familiarization with HIPAA regulations. In today's global society basic foreign language skills are increasingly important to facilitate communication in a medical environment. Strong human relations skills are also important as medical office administrators interact with people in stressful situations. These skills provide medical office administrators opportunities for promotion to medical office management positions.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless the student contacts Records and Registration and indicates he/she does not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Applied Business degree in Medical Office Administration, a graduate will be able to:

- Compose and produce quality business documents using technology.
- Perform office administrative functions using critical thinking, management, prioritizing, and organizational skills.
- Code medical documents and assist in the management of patient's health information.
- Demonstrate good oral communication skills.
- Demonstrate good human relations skills, including customer service, teamwork, and ethics.

### Scholastic Preparation

Medical Office Administration students should possess basic computer skills: use a keyboard, mouse, external storage device, and a printer; differentiate among drives, folders, and files; employ a username and password. Students lacking in any of these areas should enroll in ITS 0700, Computer Fundamentals, prior to enrolling in any OAD or other ITS courses. Students should also be able to type at least 35 words per minute on a five-minute timed writing. Students who cannot meet this standard should enroll in ITS 0710 Keyboarding prior to enrolling in any OAD or other college level ITS course. Students who cannot meet the 35 word per-minute standard on the first day of OAD 1101 will be required to withdraw and enroll in ITS 0710. ITS 0700 and ITS 0710 are considered preparatory courses to assist with successfully entering the Office Administration Program and do not count toward the degree.

### Transfer Options

Students enrolled in Associate of Applied Business and Associate of Applied Science degree programs are preparing for employment upon graduation from the program. However, at some point many of these students are also interested in completing a bachelor's degree. A number of colleges or universities have designed bachelor's completion programs designed for students completing applied degrees. See the Transfer section of the catalog for more information.

Course #	Course Title	Credit Hours
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#### Fall

OAD 1101	Document Production I ^**	3
OAD 1205	Office Procedures	3
ACC 1000	Accounting Concepts	3
ENG 1111	English I	3
FYE 1101	College Success	1

#### Spring

OAD 1105	Business English ^	4
BIO 1105	Fundamentals of Anatomy and Physiology	3
ITS 1105	Computer Concepts and Software Applications ^*	3
MST 1105	Medical Terminology ^***	2
MTH 1060	Business Mathematics ^	3

#### Fall

OAD 2301	CPT/ICD-10-PCS Coding	3
OAD 2302	ICD-10-CM Coding	3
EBE 1000	Employability Skills	1
ENG 2211	Business Communication	3
PSY 1111	Introduction to Psychology	3
SOC 1110	Introduction to Sociology	or
SPN 1100	Survival Spanish	3

#### Spring

OAD 2205	Electronic Health Records	3
OAD 2312	Advanced Medical Coding	3
OAD 2320	Medical Office Certification Review	1
OAD 2703	Co-op Education/Internship	3
MST 1140	Human Disease	3
COM 1110	Interpersonal Communication I	or
COM 1170	Small Group Communication	3
Total Credit Hours		60

^Proficiency test available.

\* Students with little or no computer background should enroll in ITS 0700 before taking other computer courses. Students without adequate keyboarding skills should enroll in ITS 0710 before taking a computer class.

\*\*Proficiency test available. Students must pass a 3-minute time writing test with speed of 35 NWPM.

\*\*\*MST 1105 must be successfully completed with a C or better within five years. If older than five years, the course must be repeated.

A complete listing of humanities and social science electives is available in the College Catalog. Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory (CPE) requirements.



## Physical Therapist Assistant

The Physical Therapist Assistant (PTA) program combines didactic and clinical learning experiences that are within the legal scope of responsibility of physical therapist assistants.

The physical therapist assistant delivers services under the direction and supervision of a physical therapist who completes an initial examination and determines the appropriate treatment plan and goals for the patient. The physical therapist assistant shares the responsibility for administering treatments, instructing patients in exercises and activities of daily living, and documenting the patient's response to therapy. Graduates will be prepared to function in their role to provide treatment in a variety of settings such as inpatient, outpatient, and home care services.

Upon successful completion of all aspects of the PTA program, graduates are eligible to take the state licensing examination. Licensure is mandatory for practice as a physical therapist assistant in the State of Ohio. The Ohio OTPTAT Board requires FBI and Ohio BCI criminal records checks as part of the Ohio licensing application process. Visit the Board website at <http://otptat.ohio.gov> for more information.

Applications will begin being accepted December 1. The application deadline for any given year is February 1. All application materials must be received on or before February 1 of the application year. If February 1 falls on a weekend, the packet must be received by the next business day. Any application materials received after this date will be classified as late and will be processed after the applications that were received on time are processed.

In addition, the Program must be able to verify that the applicant has made application to CSC, and that official transcripts from other institutions have been received, by February 1. Transfer students should submit their CSCC applications and official transcripts early enough to avoid problems.

### Program Mission Statement

To provide high quality didactic and clinical learning experiences that are reflective of evidence-based physical therapy practice, in order to prepare diverse learners to pass the state licensing examination and subsequently practice as competent and responsible physical therapist assistants to meet the needs of the community. PTA Program Statement of Philosophy

### Vision Statement

The PTA Program will strive to achieve the highest level of success for our graduates to practice as physical therapist assistants, through using innovative learning strategies, capitalizing on community partnerships, promoting the need for lifelong learning.

### Guiding Principles

- **Learning**  
The faculty believe that the education process is shared by the teacher and learner and results in the learner's ability to transfer principles, apply concepts, and create new ideas. Learning in the PTA curriculum is best achieved within an environment of flexibility,

innovative thinking and collaboration which prepares students to solve problems and to provide the highest quality of physical therapy services.

- **Community**  
The Physical Therapist Assistant program faculty seek to promote learning, growth, and success in a diverse population of students and to foster their development of skills in preparation for meeting the health care needs of the community.
- **Partnerships**  
The faculty believe that the consumer will benefit most when the physical therapist and the physical therapist assistant work together as an integrated team. The program will partner with clinical facilities to promote application of learned knowledge, skills, the role of the PT/PTA team, and ethical standards of practice for PTA practitioners.
- **Innovation**  
We believe that learning is a lifelong, self-directed activity motivated by the desire to acquire new knowledge and skills or to maintain and improve one's personal and professional functioning. Learning is not a process of passive assimilation, but requires active involvement and is facilitated when learners are goal-directed, when material is relevant to goals, and when concepts progress from simple to complex.
- **Diversity**  
We recognize, honor and celebrate diversity in our students, faculty and community and pledge to nurture tolerance, independent thought, and respect for the community that we serve. We believe that the educational needs of a diverse population of students are individualized and are related to the learner's innate abilities, life experiences, and environmental conditions. We pledge to treat each person with respect, equity and fairness and to serve as role models to develop the same in the students.

### Adaptability

We will strive to continually improve the quality of the program. The program faculty seek input from other faculty, clinical instructors, administrators, students, graduates and the community and use that information to make adaptations and improvements to the program.

### Technical Standards

All applicants accepted into the Physical Therapist Assistant program must be able to meet the essential functions, skills, and abilities required to provide safe patient practice with or without reasonable accommodations. The essential functions, skills, and abilities are listed in the PTA Application Handbook which is linked to the program page on the College's website. Applicants are required to sign a form indicating they have reviewed these essential functions, skills, and abilities and submit that form as part of the program application process.

### Course Format

Most PTA courses are composed of two components, an online lecture component and an onsite lab component, which may be taught at the Leffel Lane campus or another College approved site. Onsite labs are currently only offered in Springfield and Columbus, Ohio. Directed practices are in clinical facilities in the greater Springfield, Dayton, Columbus, and Cincinnati, Ohio regions. The College has national contracts with several organizations

and may consider clinical placements outside of these regions.

### Liability Insurance

Students will be billed for liability insurance for the academic year of directed practice courses.

### Graduate Statistics

Information reported is from the December 2024 Annual Assessment Report to CAPTE. Additional information about graduation rates can be requested from the program coordinator.

Graduation rate\*: 73.96%

\*Graduation rate includes the graduating classes of 2022 and 2023. Graduation rate is defined by the Commission on Accreditation in Physical Therapy Education (CAPTE) as the percentage of students who matriculated in the first term after the drop/add period and who completed the program.

First time Licensure Pass Rate \*\*: 64.52%

Ultimate Licensure pass rate \*\*: 75.6%

\*\*Licensure pass rates include the graduating class of 2022 and 2023 as reported by the Federation of State Boards of Physical Therapy. Ultimate pass rate is defined by the Commission on Accreditation in Physical Therapy Education (CAPTE) as the percentage of graduates who take and pass the National Physical Therapist Assistant Exam, regardless of the number of attempts.

Employment rate \*\*\*: 100%

\*\*\*Employment rate includes the graduating class of 2022 and 2023 and reflects employment rate of graduates who were eligible for and sought employment as a PTA within one year of graduation.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Physical Therapist Assistant, students and graduates will be able to:

- Demonstrate proficient entry-level knowledge and skill in implementing treatment practices appropriate to the plan of care established by the physical therapist.
- Demonstrate proficient entry-level knowledge and skill in utilizing testing and measurement techniques appropriate to the plan of care established by the physical therapist.
- Communicate effectively with patients, families, colleagues and other health care providers.
- Demonstrate behavior that reflects respect for and sensitivity to individual differences when working with patients, families, colleagues, and other health care professionals.
- Adhere to ethical and legal standards throughout the provision of physical therapy services.
- Provide patient care in a safe manner that minimizes risk to patient, self, and others.
- Practice physical therapy in an effective manner making judgments consistent with the physical therapist plan of care and the role of the physical therapist assistant.

- Practice lifelong learning that reflects social responsibility and career development.

### Program Admission Requirements

The Physical Therapist Assistant program must restrict the number of students accepted into the program each year due to the limited availability of clinical sites. The program is currently able to accept a maximum of 36 students each year; (26 students in Springfield and 10 students in Columbus.) Acceptance into the PTA program is a competitive process and application does not guarantee admission.

In addition to completing the standard procedures for admission to the College, students must apply to the PTA program separately. The PTA program application process, criteria, selection process and time line are provided in the PTA Application Handbook; which can be found on the program page on the college website.

Students must be 18 years or older for admission to the PTA program.

Students must have completed the following academic requirements to be eligible to apply to the Physical Therapist Assistant program:

1. Reading  
College-ready reading skills are required and may be demonstrated in one of the following ways.  
  
Testing out of preparatory reading via ACT, SAT, or College's reading placement test\*  
  
College's reading placement test was waived for:  
1) College English composition course with a grade of C or better  
2) Recent high school senior English course with appropriate grade  
  
Completion of preparatory reading course; ENG 0900 or ENG 0980 with a grade of C or higher.
2. Writing  
College-ready writing skills are required and may be demonstrated in one of the following ways:  
  
Testing out of preparatory writing via ACT, SAT, or College's writing placement test\*  
  
College's writing placement testing was waived for:  
1) College English composition course with a grade of C or better  
2) Recent high school senior English course with appropriate grade  
  
Completion of preparatory writing course; ENG 0900 or ENG 0980 with a grade of C or higher
3. Statistics  
College-ready math skills enabling the student to enroll in statistics may be demonstrated in one of the following ways.  
  
Testing out of appropriate preparatory math level via ACT, SAT, or College's math/algebra placement testing\*  
  
College's math placement testing was waived for:  
1) College Ohio Transfer Module (OTM) equivalent math course with a C or better within 5 years

2) Recent high school senior algebra II course with appropriate grade within the last 5 years

Completion of MTH 0550 if a grade of C or higher has not been earned in MTH 0750.

\*Students who need to take the College's placement testing should contact the Student Academic Support Center at 937-328-6049 to schedule an appointment for ACCUPLACER testing. The College's Placement Testing webpage, <https://www.clarkstate.edu/admissions/placement-assessment/>, provides additional helpful information for preparation and scheduling of the testing.

4. Biology\*\*

Students who have not completed BIO 2121, Anatomy and Physiology (or the equivalent), must meet the biology prerequisites for BIO 2121 to apply. To see the current prerequisites for BIO 2121, view the current College catalogue <https://www.clarkstate.edu/academics/academic-catalog/>

5. Chemistry\*\*

Chemistry is no longer required as pre-requisite for BIO 2121, except when students are using high school credit to meet the BIO 2121 prerequisite requirements. In this case both high school chemistry and biology are required to meet the pre-requisites. If students are taking BIO 1410 at Clark State to meet pre-requisites, a separate chemistry course is no longer a requirement. To see the current prerequisites for BIO 2121, view the current College catalogue (<https://www.clarkstate.edu/academics/academic-catalog/>)

\*\*Note: Students who plan on taking BIO 1410 at Clark State need to make sure they meet the prerequisite and co-requisite requirements for this course.

Those requirements include passing all appropriate placement tests or taking the appropriate college preparatory or college level pre or co-requisite courses.

\*\*Students may apply for fall admission if they are enrolled in the Biology pre-requisite at the time of application. Any acceptance decisions will be contingent on the successful completion of the pre-requisite courses no later than Spring semester prior to the Fall for which the student has been accepted

GPA of 2.5 in the required curricular courses; the GPA includes fundamentals of biology ONLY when no other courses in the PTA curriculum have been taken.

In order to be accepted into the physical therapist assistant courses, students must maintain the required cumulative grade point average in the required courses in the curriculum. College preparatory courses and other courses, which are not listed as part of the curriculum, are not included in calculating the GPA. However, a minimum grade of C is required in the prerequisite and college preparatory courses. Please refer to the PTA Application Handbook for additional information on courses in which a C is required. While students are waiting to be admitted they may take any of the non-core PTA courses in the curriculum. (BIO 1119, Muscle Anatomy and Biomechanics, is considered a core PTA course).

Students are required to complete a total of 30 hours of observation/volunteer/paid work experience in two different settings under the supervision of a PT or PTA, with a minimum of 10 hours at each location, within

five years prior to application to the PTA Program. (I.e., Students can do 15 hours in one and 15 hours in another, or 20 in one and 10 in another, but NOT 28 in one and 2 in another). Students are advised to begin their Observation/Volunteer/Paid Work Experience hours while working on their academic application requirements. All 30 hours must be completed at the time of application.

### Graduation Requirements

A 2.0 cumulative grade point average (GPA) on a 4.0 scale and grades of C or better in the major courses in the PTA curriculum are required to graduate. Refer to the PTA Application Handbook for a list of courses that require a grade of C or better.

### Clinical Requirements

Prior to summer between the first and second year, a physical exam, a two-step Mantoux test, Hepatitis B immunization or waiver, a health history including record of childhood immunizations or adult titers, a flu shot, professional CPR, and First Aid training are required. A criminal records check must be completed within the three months immediately prior to entry into clinical courses in the summer semester. At a minimum, a civilian (BCI) background check is required. A federal (FBI) background check may be required. Additional medical tests, including drug screens, and other requirements may be necessary depending upon clinical site.

### Comments and Suggestions

The Physical Therapist Assistant (PTA) program engages in continuing assessment and improvements. Comments, suggestions and constructive criticism from students and the public are welcome and are part of this process. Comments must be submitted in writing to the PTA Program Coordinator at the following address.

Clark State College  
Physical Therapist Assistant Program Coordinator  
570 East Leffel Lane  
Springfield, OH 45505  
937-328-6102  
[dinsmoret@clarkstate.edu](mailto:dinsmoret@clarkstate.edu)

The PTA Program Coordinator will respond to all written comments that include the name and contact information for the individual submitting the comments, within ten (10) business days. The Program Coordinator will investigate all complaints and will utilize College resources as indicated.

Clark State College  
Dean, Health, Human and Public Services  
570 East Leffel Lane  
Springfield, OH 45505  
937-328-6060  
[Dolans@clarkstate.edu](mailto:Dolans@clarkstate.edu)

Complaints about the PTA Program Coordinator can be submitted to the Health, Human and Public Services Dean. Complaints related to accreditation of the PTA Program can be submitted to The Commission on Accreditation of Physical Therapy Education (CAPTE).

CAPTE  
3030 Potomac Ave., Suite 100  
Alexandria, Virginia 22305-3085  
703-706-3245  
[accreditation@apta.org](mailto:accreditation@apta.org)  
[www.capteonline.org](http://www.capteonline.org)

Retaliation against any individual filing a complaint against the PTA Program is strictly prohibited.

## Accreditation

The Physical Therapist Assistant Program at Clark State College is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 3030 Potomac Ave., Suite 100, Alexandria, Virginia 22305-3085; telephone: 703-706-3245; email: [accreditation@apta.org](mailto:accreditation@apta.org); website: <http://www.capteonline.org>. The program's current status is probationary accreditation; for more information see <https://www.capteonline.org/about-capte/recent-actions-and-updates/recent-actions>. If needing to contact the program/institution directly, please call 937-328-6102 or email [dinsmoret@clarkstate.edu](mailto:dinsmoret@clarkstate.edu).

Course #	Course Title	Credit Hours
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<b>Fall</b>		
PTA 1112	PTA Survey *	1
BIO 1119	Muscle Anatomy and Biomechanics **	3
PTA 1122	PTA Procedures I (second 8 weeks)**	3
BIO 2121	Anatomy and Physiology I ***	4
ENG 1111	English I	3
FYE 1101	College Success (first 8 weeks)	1
MST 1105	Medical Terminology	2

### Spring

PTA 1148	PTA Procedures II (first 8 weeks)**	5
PTA 1162	PTA Rehabilitation I (second 8 weeks)**	5
BIO 2122	Anatomy and Physiology II ***	4
ENG 1112	English II	3

### Summer

PTA 2231	PTA Directed Practice I (last 5 weeks)**	2
PTA 2243	PTA Procedures III (first 7 weeks)**	4
PTA 2291	PTA Seminar I (last 4 weeks)**	1

### Fall

PTA 2262	PTA Rehabilitation II **	5
PTA 2270	PTA Trends and Issues **	1
PSY 1111	Introduction to Psychology	3
STT 2640	Elementary Statistics I	3

### Spring

PTA 2232	PTA Directed Practice II (first six weeks of A Term)	3
PTA 2292	PTA Seminar II (first 4 weeks of A Term)**	1
PTA 2275	PTA Special Topics (last 2 weeks of A Term)**	1
PTA 2233	PTA Directed Practice III (last 8 weeks)	3
PTA 2293	PTA Seminar III (last 8 weeks)**	1
PSY 2223	Lifespan Human Growth and Development	3
Total Credit Hours		65

\*May be taken within two years of acceptance into the program although no sooner than one year is preferred. If the course was completed more than 24 months prior to starting the program, the course will need to be repeated.

\*\*Must be accepted into the PTA program to take these classes

\*\*\*Must be completed with a C or better within 5 years of acceptance to the program. If older than 5 years, the course must be repeated.

NOTE: MST 1105 and all courses with a BIO or PTA course code must be completed with a C or better.

The program plan is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students who plan to continue to work are strongly encouraged to complete all or most non-core PTA courses prior to starting the program. Students should consult their academic advisor for help in planning their schedules.



## Radiographic Imaging (Consortium Program)

### Classes must be taken at both Clark State and Rhodes State College to complete this program.

As a member of the Northwest Ohio Allied Health Education Consortium, Clark State College is able to bring an associate degree in Radiographic Imaging to Clark State students. This consortium allows Clark State students to complete their general education and basic classes through Clark State at one of its campuses or online. Students are also enrolled at Rhodes State. Technical courses are taught by Rhodes State faculty through distance learning via online format. Students will need to travel to the Rhodes State campus in Lima for skills lab instruction and hands-on practice approximately once a week. Clinical learning experiences will be scheduled in regional healthcare facilities. A very important aspect of the Radiographic Imaging consortium program is that these clinical seats are reserved for qualified Clark State students living in Clark State's service area.

Complete the Radiographic Imaging Program Intent Form for Consortium Students! Specific information about the Radiographic Imaging program is available on Rhodes State website.

The technical courses in the Radiographic Imaging program start each year in fall semester (August). Seats for the program are filled with qualified applicants. Clark State applicants for this program must also apply to Rhodes State online. Students should indicate they are applying to the Northwest Ohio Allied Health Education Consortium and that they are from Clark State by checking the appropriate boxes at the top of the application. Seats are limited so students are encouraged to submit documentation of meeting qualification requirements to Rhodes State in a timely manner.

The Radiographic Imaging Program provides an education in the technical skills and knowledge necessary to safely use radiation to produce high-quality images of internal structures and body systems to provide physicians with diagnostic information on their patients. Upon successful completion of the program, the student will be awarded an Associate in Applied Science degree from Rhodes State College and is eligible to take the certifying examination in radiography by the American Registry of Radiologic Technologists. Graduates of the program find employment as radiographers in a variety of settings including hospitals, clinics, and physicians' offices.

### Notice to Prospective or Current Radiographic Imaging Students

Students who have ever been convicted of a prior felony and/or some misdemeanors may not be able to participate in clinical education experiences at some hospitals or other clinical sites, therefore preventing them from completing the program. A criminal record may also prevent a graduate from obtaining a license or certificate in a chosen health-care profession. Students admitted to a program containing off campus clinical/practicum experiences will be required to submit to drug screening.

### Qualification Requirements

Academic qualification for the Radiographic Imaging program are listed below as items 1-6. These requirements must be met in order to be considered for the program.

1. Appropriate American College Test (ACT) or college placement test scores or completion of college preparatory coursework as listed below.  
  
Test out of college preparatory writing coursework OR completion of ENG 0900 with a grade of C or higher.  
  
Test out of college preparatory reading coursework OR completion of ENG 0850 with a grade of C or higher.  
  
Test out of college algebra, OR completion of MTH 1280 with a grade of C or higher.
2. Overall and program-related GPA of 2.75. (Program-related GPA is defined as the average GPA of program specific coursework excluding the Success course).
3. Complete and score a minimum score of 60 on the Test of Essential Academic Skills (ATI TEAS) assessment exam.
4. Attend a mandatory program orientation session at Rhodes State and sign informed consent forms.
5. Complete 16 hours of observation in a clinical setting with a Registered Technologist in Radiography using the Observation Form in the Application Packet.
6. Have Clark State and other college transcripts with transferable college credits for basic and general education courses sent to Rhodes State.

All students who meet the programs' qualification requirements are placed on the qualified list. If there are more applicants than available spots, students will be offered a seat based on the qualifying criteria (aggregate of calculated GPA, ATI TEAS score, the number of program specific courses completed with a C or better, and the two observation rubrics). If the qualifying criteria aggregate score of two applicants is equal, then the college application date will be used to rank order those applicants.

Qualified students who were not admitted due to space limitations will be admitted in a following cohort year. This acceptance is contingent upon re-application prior to the deadline of the offered cohort year to verify continued interest in pursuing the degree. These students will be encouraged to attend an informational meeting with programmatic faculty to discuss strategies for persistence within the program or opportunities for other health care majors with seats available for immediate entry and/or other career directions offered at the College.

Students will have additional requirements that will have to be met before entrance into the Radiographic Imaging program. These requirements include but are not limited to observation hours, physical, immunizations, background checks, drug screens, and meeting with the Radiograph Imaging program director.

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
MTH 1280	College Algebra	4
BIO 2121	Anatomy and Physiology I	4
- -	RAD 1010 (RSC)	0
- -	RAD 1210 (RSC)	3
- -	RAD 1310 (RSC)	3



**Spring**

BIO 2122	Anatomy and Physiology II	4
ENG 1111	English I	3
MST 1105	Medical Terminology	2
- -	RAD 1020 (RSC)	0
- -	RAD 1220 (RSC)	3
- -	RAD 1320 (RSC)	3

**Summer**

- -	RAD 1030 (RSC)	0
SOC 1110	Introduction to Sociology	3
COM 1120	Public Speaking I	3

**Fall**

- -	RAD 2010 (RSC)	0
- -	RAD 2210 (RSC)	3
- -	RAD 2310 (RSC)	0

**Spring**

- -	ITS Elective	1
PHL 2300	Medical Ethics	3
- -	RAD 2020 (RSC)	0
- -	RAD 2220 (RSC)	3
- -	RAD 2320 (RSC)	2
- -	RAD 2490 (RSC)	1
	Total Credit Hours	49

**Registered Nursing**

Registered Nursing graduates are prepared to function in beginning staff-level registered nurse positions in hospitals, extended care facilities, clinics and comparable health care facilities as members of a health care team.

**Licensure**

Upon completion of the program, the graduate is eligible to apply to take the NCLEX-RN examination. Licensure is mandatory for practice as a RN. Candidates for licensure in Ohio must obtain a criminal background check and disclose information related to any prior felony or misdemeanor, crimes involving gross immorality or moral turpitude, violation of a drug law, and/or recent diagnosis or treatment of a psychotic disorder. The Ohio Board of Nursing will determine whether the candidate may take the licensing exam.

**Student Achievement Data**

The nursing program publishes student achievement data that is required by the Accreditation Commission for Education in Nursing (ACEN). The data includes the graduates' success on the licensure examination, program completion rates, and employment rates.

**Licensure Examination Pass Rate** - Performance on the licensure examination for first-time test-takers  
2024 first-time takers for all cohorts (RN, LPN to RN, and Paramedic to RN) = 91.67%

**Program Completion Rate** - Percentage of students who graduate within a defined period of time. The definition used by ACEN for the program completion rate is the number of students who complete the program in no more than 150% of the stated program length beginning with enrollment in the first nursing course.  
2024 Completion for all cohorts (RN, LPN to RN, and Paramedic to RN) = 82%

**Job Placement Rate**- Percentage of graduates, responding to a graduate survey, who were employed in a position for which the program prepared them six (6) to twelve (12) months after graduating.  
2024 Job Placement Rate for all graduates (RN, LPN to RN, and Paramedic to RN) = 100%

**Bachelor of Science in Nursing (BSN) Completion Option**

Graduates of the Associate of Applied Science degree in Nursing are prepared to obtain licensure and employment as a registered nurse. Graduates are also prepared to continue their education and obtain a bachelor's degree in nursing. A number of colleges and universities have designed bachelor's nursing completion programs for associate degree prepared registered nurses. To investigate these programs affiliated with Clark State, please use the following link to take you to Clark State's transfer guides. [go.clarkstate.edu/transfer-guides/](https://go.clarkstate.edu/transfer-guides/)

**Learning Outcomes**

Upon completion of an Associate of Applied Science degree in Registered Nursing, a graduate will be able to:

- **Patient Centered Care/Human Flourishing:** The student will engage in professional nursing practice, providing holistic, individualized, compassionate care that is patient centered and culturally and developmentally appropriate across the lifespan.
- **Leadership and Professionalism/Professional Identity:** The student will transition to the role of the professional nurse, incorporating legal, ethical, and professional standards.
- **Evidence Based Practice and Quality Improvement/ Spirit of Inquiry:** The student will incorporate a spirit of inquiry through the utilization of current best evidence to make clinical judgements for quality improvement.
- **Communication, Teamwork and Collaboration/ Professional Identity:** The student will utilize effective communication with nursing and inter-professional teams, fostering an open communication, respect, and shared decision making.
- **Safety, Informatics and Technology/Nursing Judgement:** The Students will integrate informatics and technology to guide nursing judgement in making clinical decisions that minimize the risk of harm to patients and providers.

**Technical Standards**

Specific attributes, characteristics, and abilities are essential to practice nursing. Professional competency is the summation of many cognitive, affective, and psychomotor skills. Students who enter the nursing program must be able to perform (with or without reasonable accommodations) these Technical Standards, which can be found within the application for the RN programs as well as the information pages for the RN program.

Students who may require accommodations to perform the technical standards should contact the College's Office of Accessibility Services to request reasonable accommodations.

Students are asked to sign a form certifying that they have read, understand, and are able to perform the

Technical Standards of the Student Nurse when applying to the program. These Technical Standards are also reviewed at the program orientation session. Attendance at this session is required for all students who have been accepted to start the nursing program's technical courses.

### Admissions Requirements

The Registered Nursing (RN) program is a space limited program that admits students three times a year in summer, fall and spring semesters. In addition to applying to the college, students must apply to the program. Minimum grade point average requirements and application to the program does not guarantee admission to the program. Entry to the nursing program is competitive and based on academic achievements. Detailed information about the RN program's competitive admission criteria, process, timeline, and forms are available on the Admissions for Healthcare Programs webpage.

### Additional Program Requirements

Prior to starting the program, students must have current healthcare provider cardiopulmonary resuscitation (CPR/BLS) certification and current state-tested nurse aide credentials or have satisfactorily completed MST 1181 or its equivalent at a community college within the past two years. Additional information about these requirements may be obtained from academic and faculty advisors. Students must also meet health requirements, show proof of health insurance, and meet criminal background check and drug screen requirements before starting the program.

Students must update health requirements, criminal background checks, and drug screens in accordance with program and clinical agency policies. Additional information about these requirements is provided at the nursing program orientation sessions that are required for all students who have been accepted to start the program. Students must complete these requirements at their own expense. Students will be billed for liability insurance for each year of clinical courses as part of a course fee.

All students enrolled in NUR 2239 are required to enroll in the Virtual ATI NCLEX review and 3-day in person ATI Live Review. All NUR 2239 students must successfully complete the specified areas within Virtual ATI NCLEX review for NUR 2239 course completion.

### Progression Requirements

In order to enroll in NUR 1130 and progress to subsequent nursing courses, students must have successfully completed all prerequisite courses with a grade of C or higher.

### Graduation Requirements

To qualify for an associate degree, Registered Nursing students must have a cumulative grade point average of 2.0 and have a grade of C or higher in all courses in the nursing curriculum.

Course #	Course Title	Credit Hours
<b>Summer</b>		
BIO 2121	Anatomy and Physiology I *	4
ENG 1111	English I	3
<b>Fall</b>		
BIO 2122	Anatomy and Physiology II *	4
PSY 1111	Introduction to Psychology	3
NUR 1121	Fundamentals of Pharmacology & Dosage- Calculation	1
NUR 1130	Basic Nursing Concepts	6.5
<b>Spring</b>		
ENG 1112	English II	3
NUR 1132	Adult Nursing I	6.5
NUR 1134	Behavioral Health Nursing	2.5
NUR 1122	Pharmacology II	1
<b>Summer</b>		
BIO 1131	Microbiology	3
<b>Fall</b>		
NUR 2234	Maternal-Newborn Nursing	2.5
PSY 2223	Lifespan Human Growth and Development	3
NUR 1123	Pharmacology III	1
NUR 2236	Adult Nursing II	6.5
<b>Spring</b>		
STT 2640	Elementary Statistics I	3
NUR 2232	Children-Family Nursing	2.5
NUR 2239	Adult Nursing III	8
NUR 2241	RN Capstone	1
Total Credit Hours		65

\*Students who are transferring in, BIO 2121 and BIO 2122, or the equivalent must be successfully completed within five years of entry into the first clinical nursing course. If older than five years, the courses must be repeated. NUR 1121 must be completed within 1 year of entry into the first clinical nursing course. If older than one year, the course must be repeated.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory requirements. Many individuals, especially part-time students and those taking college preparatory education courses, will require additional semesters of study.

The curriculum plan is for the fall semester start. The spring semester start varies somewhat in the sequencing of courses. Contact the School of Health, Human and Public Services office for a copy of the spring semester start curriculum plan. Many non-nursing and some nursing (NUR) courses in the curriculum are available in both traditional and online/hybrid formats.

Students should consult their academic advisors for help in planning their schedules.

The ATI TEAS Exam must be taken within 2 years prior to program entry for the RN Traditional Track. Those with proof of a college degree are exempt from this requirement.

## Registered Nursing - Evening / Weekend

The Registered Nursing program is also offered as a part-time evening-weekend program. All non-nursing (non NUR) courses must be completed before a student enrolls in the first evening nursing (NUR) course. Graduates are prepared to function in beginning staff-level registered nurse positions in hospitals, extended care facilities, clinics and comparable health care facilities as members of a health care team.

### Technical Standards

Specific attributes, characteristics, and abilities are essential to practice nursing. Professional competency is the summation of many cognitive, affective, and psychomotor skills. Students who enter the nursing program must be able to perform (with or without reasonable accommodations) these Technical Standards, which can be found within the application for the RN program as well as the information pages for the RN program.

Students who may require accommodations to perform the technical standards should contact the College's Office of Accessibility Services to request reasonable accommodations.

Students are asked to sign a form certifying that they have read, understand, and are able to perform the Technical Standards of the Student Nurse when applying to the program. These Technical Standards are also reviewed at the program orientation session. Attendance at this session is required for all students who have been accepted to start the nursing program's technical courses.

### Licensure

Upon completion of the program, the graduate is eligible to apply to take the NCLEX-RN examination. Licensure is mandatory for practice as a RN. Candidates for licensure in Ohio must obtain a criminal background check and disclose information related to any prior felony or misdemeanor, crimes involving gross immorality or moral turpitude, violation of a drug law, and/or recent diagnosis or treatment of a psychotic disorder. The Ohio Board of Nursing will determine whether the candidate may take the licensing exam.

### Student Achievement Data

The nursing program publishes student achievement data that is required by the Accreditation Commission for Education in Nursing (ACEN). The data includes the graduates' success on the licensure examination, program completion rates, and employment rates.

**Licensure Examination Pass Rate** - Performance on the licensure examination for first-time test-takers  
2024 First-time test-takers from all cohorts (RN, LPN to RN, and Paramedic to RN) = 91.67%

**Program Completion Rate** - Percentage of students who graduate within a defined period of time. The definition used by ACEN for the program completion rate is the number of students who complete the program in no more than 150% of the stated program length beginning with enrollment in the first nursing course.  
2024 Completion rate for all cohorts (RN, LPN to RN, and Paramedic to RN) = 82%

**Job Placement Rate** - Percentage of graduates, responding to a graduate survey, who were employed in a position for which the program prepared them six (6) to twelve (12) months after graduating.  
2024 Job Placement rates for all graduates (RN, LPN to RN, and Paramedic to RN) = 100%

### Bachelor of Science in Nursing (BSN) Completion Options

Graduates of the Associate of Applied Science degree in Nursing are prepared to obtain licensure and employment as a registered nurse. Graduates are also prepared to continue their education and obtain a bachelor's degree in nursing. A number of colleges and universities have designed bachelor's nursing completion programs for associate degree prepared registered nurses. To investigate these programs affiliated with Clark State, please use the following link to take you to Clark State's transfer guides. [go.clarkstate.edu/transfer-guides/](https://go.clarkstate.edu/transfer-guides/)

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Registered Nursing, a graduate will be able to:

- **Patient Centered Care/Human Flourishing:** The student will engage in professional nursing practice, providing holistic, individualized, compassionate care that is patient centered and culturally and developmentally appropriate across the lifespan.
- **Communication, Teamwork and Collaboration/ Professional Identity:** The student will utilize effective communication with nursing and inter-professional teams, fostering an open communication, respect, and shared decision making.
- **Evidence Based Practice and Quality Improvement/ Spirit of Inquiry:** The student will incorporate a spirit of inquiry through the utilization of current best evidence to make clinical judgements for quality improvement.
- **Safety, Informatics and Technology/Nursing Judgement:** The Students will integrate informatics and technology to guide nursing judgement in making clinical decisions that minimize the risk of harm to patients and providers.
- **Leadership and Professionalism/Professional Identity:** The student will transition to the role of the professional nurse, incorporating legal, ethical, and professional standards.

### Admissions Requirements

The Registered Nursing (RN) Evening program is a space limited program that admits students once a year in fall semester. In addition to applying to the college, students must apply to the program. Minimum grade point average must be met prior to applying to the RN program. Applicants must complete the TEAS test (Test of Essential Academic Skills). Completion of the minimum requirements and application to the program does not guarantee admission to the program. Entry to the nursing program is competitive and based on academic achievements. Detailed information about the RN Evening program's competitive admission criteria, process, timeline, and forms are available on the Admissions for Healthcare Programs webpage.

### Additional Program Requirements

Prior to starting the program, students must have current healthcare provider cardiopulmonary resuscitation (CPR/ BLS) certification and current state-tested nurse aide

credentials or have satisfactorily completed MST 1181 or its equivalent at a community college within the past two years. Additional information about these requirements may be obtained from academic and faculty advisors. Students must also meet health requirements, show proof of health insurance, and meet criminal background check and drug screen requirements before starting the program.

Students must update health requirements, criminal background checks, and drug screens in accordance with program and clinical agency policies. Additional information about these requirements is provided at the nursing program orientation sessions that are required for all students who have been accepted to start the program. Students must complete these requirements at their own expense. Students will be billed for liability insurance for each year of clinical courses as part of a course fee.

All students enrolled in NUR 2239 are required to enroll in the Virtual ATI NCLEX review. All NUR 2239 students must successfully complete the specified areas within Virtual ATI NCLEX review for NUR 2239 course completion.

### Progression Requirements

In order to enroll in NUR 1130 and progress to subsequent nursing courses, students must have successfully completed all prerequisite courses with a grade of C or higher.

### Graduation Requirements

To qualify for an associate degree, Registered Nursing students must have a cumulative grade point average of 2.0 and have a grade of C or higher in all courses in the nursing curriculum.

Course #	Course Title	Credit Hours
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#### Fall

ENG 1111	English I	3
PSY 1111	Introduction to Psychology	3

#### Spring

BIO 1131	Microbiology	3
ENG 1112	English II	3

#### Fall

BIO 2121	Anatomy and Physiology I *	4
PSY 2223	Lifespan Human Growth and Development	3

#### Spring

BIO 2122	Anatomy and Physiology II *	4
STT 2640	Elementary Statistics I	3

#### Fall

NUR 1121	Fundamentals of Pharmacology & Dosage-Calculation	1
NUR 1130	Basic Nursing Concepts	6.5

#### Spring

NUR 1132	Adult Nursing I	6.5
NUR 1134	Behavioral Health Nursing	2.5
NUR 1122	Pharmacology II	1

#### Fall

NUR 2234	Maternal-Newborn Nursing	2.5
NUR 2236	Adult Nursing II	6.5
- -	Pharm III	1

#### Spring

NUR 2232	Children-Family Nursing	2.5
NUR 2239	Adult Nursing III	8
- -	NCLEX Capstone	1
	Total Credit Hours	65

\* BIO 2121 and BIO 2122, or the equivalent must be successfully completed within five years of entry into the first clinical nursing course. If older than five years, the courses must be repeated. NUR 1110 must be completed within 1 year of entry into the first clinical nursing course. If older than one year, the course must be repeated.

The program schedule is designed for part-time students who have completed all prerequisites and who have no college preparatory requirements. Individuals taking college preparatory education courses will require additional semesters of study. Many non-nursing and some nursing (NUR) courses in the curriculum are available in both traditional and online/hybrid formats. Students should consult their academic advisors for help in planning their schedules.

## Registered Nursing - LPN to RN Transition

The LPN to RN option meets the educational needs of the licensed practical nurse desiring to become a registered nurse. Graduates are prepared to function in beginning staff-level registered nurse positions in hospitals, extended care facilities, clinics, and comparable health care facilities as members of a health care team.

### Technical Standards

Specific attributes, characteristics and abilities are essential to practice nursing. Professional competency is the summation of many cognitive, affective, and psychomotor skills. Students who enter the nursing program must be able to perform (with or without reasonable accommodations) these Technical Standards, which may be found within the application for the RN program as well as the information page for the RN program.

Students who may require accommodations to perform the technical standards should contact the College's Office of Accessibility Services to request reasonable accommodations.

Students are asked to sign a form certifying that they have read, understand, and are able to perform the Technical Standards of the Student Nurse when applying to the program. These Technical Standards are also reviewed at the program orientation session. Attendance at this session is required for all students who have been accepted to start the nursing program's technical courses.

### Licensure

Upon completion of the program, the graduate is eligible to apply to take the NCLEX-RN examination. Licensure is mandatory for practice as a RN. Candidates for licensure in Ohio must complete a criminal background check and disclose information related to any prior felony or misdemeanor, crime involving gross immorality or moral turpitude, violation of a drug law, and/or recent diagnosis or treatment of a psychotic disorder. The Ohio Board of Nursing will determine whether the candidate may take the licensing exam.

### Student Achievement Data

The nursing program publishes student achievement data that is required by the Accreditation Commission for Education in Nursing (ACEN). The data includes the graduates' success on the licensure examination, program completion rates, and employment rates.

**Licensure Examination Pass Rate** - Performance on the licensure examination for first-time test-takers  
2024 First-time test-takers from all cohorts (RN, LPN to RN, and Paramedic to RN) = 91.67%

**Program Completion Rate** - Percentage of students who graduate within a defined period of time. The definition used by ACEN for the program completion rate is the number of students who complete the program in no more than 150% of the stated program length beginning with enrollment in the first nursing course.  
2024 Completion rate for all cohorts (RN, LPN to RN, and Paramedic to RN) = 82%

**Job Placement Rate** - Percentage of graduates, responding to a graduate survey, who were employed in a position for which the program prepared them six (6) to twelve (12) months after graduating.  
2024 Job Placement rate for all graduates (RN, LPN to RN, and Paramedic to RN) = 100%

### Bachelor of Science in Nursing (BSN) Completion Options

Graduates of the Associate of Applied Science degree in Nursing are prepared to obtain licensure and employment as a registered nurse. Graduates are also prepared to continue their education and obtain a bachelor's degree in nursing. A number of colleges and universities have designed bachelor's nursing completion programs for associate degree prepared registered nurses. To Investigate these programs affiliated with Clark State, please use the following link to take you to Clark State's transfer guides. [go.clarkstate.edu/transfer-guides/](https://go.clarkstate.edu/transfer-guides/)

### Degree Availability

The Registered Nursing - LPN to RN Transition degree is available full-time day and evening in Springfield.

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Registered Nursing, a graduate will be able to:

- **Patient Centered Care/Human Flourishing:** The student will engage in professional nursing practice, providing holistic, individualized, compassionate care that is patient centered and culturally and developmentally appropriate across the lifespan.
- **Evidence Based Practice and Quality Improvement/ Spirit of Inquiry:** The student will incorporate a spirit of inquiry through the utilization of current best evidence to make clinical judgements for quality improvement.
- **Safety, Informatics and Technology/Nursing Judgement:** The Students will integrate informatics and technology to guide nursing judgement in making clinical decisions that minimize the risk of harm to patients and providers.
- **Leadership and Professionalism/Professional Identity:** The student will transition to the role of the professional nurse, incorporating legal, ethical, and professional standards.
- **Communication, Teamwork and Collaboration/ Professional Identity:** The student will utilize effective communication with nursing and inter-professional teams, fostering an open communication, respect, and shared decision making.

### Admission Requirements

The LPN to RN program is a space limited program that admits students twice a year in fall and spring semesters. In addition to applying to the college, students must apply to the program. Minimum grade point average, requirements must be met prior to applying to the program. Applicants must complete the TEAS test (Test of Essential Academic Skills). Completion of the minimum requirements and application to the program does not guarantee admission. Entry to the LPN to RN program is competitive and based on academic achievements. Detailed information about the program's competitive admission criteria, process, timeline, and forms are available on the RN - LPN to RN transition petition page.



### Additional Program Requirements

Prior to starting the program, students must have current healthcare provider cardiopulmonary resuscitation (CPR/BLS) certification. Students must also meet health requirements, show proof of health insurance, meet criminal background check, and drug screen requirements before starting the program.

Students must update health requirements, criminal background checks, and drug screens in accordance with program and clinical agency policies. Additional information about these requirements is provided at the nursing program orientation sessions that are required for all students who have been accepted to start the program. Students must complete these requirements at their own expense. Students will be billed for liability insurance for each year of clinical courses as part of a course fee.

All students enrolled in NUR 2239 are required to enroll in the Virtual ATI review. All NUR 2239 students must successfully complete the specified areas within Virtual ATI NCLEX review for NUR 2239 course completion.

### Progression Requirements

In order to progress to the next nursing course, students must have successfully completed all prerequisite courses with a grade of C or higher.

### Graduation Requirements

To qualify for an associate degree, LPN to RN Transition students must have a cumulative grade point average (GPA) of 2.0 and have a grade of C or higher in all courses in the nursing curriculum.

Course #	Course Title	Credit Hours
<b>Spring</b>		
BIO 1131	Microbiology	3
BIO 2121	Anatomy and Physiology I *	4
ENG 1111	English I	3
PSY 1111	Introduction to Psychology	3

#### Summer

BIO 2122	Anatomy and Physiology II *	4
ENG 1112	English II	3
NUR 1121	Fundamentals of Pharmacology & Dosage-Calculation	1

#### Fall

NUR 1122	Pharmacology II	1
NUR 1135	LPN to RN Transition	3
NUR 1136	Adult Nursing for LPNs	2
NUR 1134	Behavioral Health Nursing	2.5
NUR -	Articulated credit awarded**	8

#### Spring

PSY 2223	Lifespan Human Growth and Development	3
NUR 2234	Maternal-Newborn Nursing	2.5
NUR 2236	Adult Nursing II	6.5
NUR 1123	Pharmacology III	1

#### Fall

STT 2640	Elementary Statistics I	3
NUR 2232	Children-Family Nursing	2.5
NUR 2239	Adult Nursing III	8
- -	NCLEX Capstone	1
	Total Credit Hours	65

\* BIO 2121 and BIO 2122, or the equivalent, must be successfully completed within five years of entry into the first clinical nursing course. If older than five years, the courses must be repeated. NUR 1121 must be completed within 1 year of entry into the first clinical nursing course. If older than one year, the course must be repeated.

\*\* Students are awarded 8 semester hours of articulated credit for advanced placement after successful completion of NUR 1135 and NUR 1136.

The curriculum is offered as a full-time day program in fall in Springfield. A evening weekend program is also available in Springfield with a spring start. The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory requirements. Individuals taking college preparatory education courses or attending school part-time will require additional semesters of study.

Many non-nursing and some nursing (NUR) courses in the curriculum are available in both traditional and online/hybrid formats for Springfield cohort students. All lab sessions are conducted on campus and/or at a healthcare facility, regardless of the format.

All students should consult their academic advisors for help in planning their schedules.

## Registered Nursing - Paramedic to RN Transition

The Paramedic to RN option meets the educational needs of the paramedic desiring to become a registered nurse. Graduates are prepared to function in beginning staff-level registered nurse positions in hospitals, extended care facilities, clinics and comparable health care facilities as members of a health care team.

### Technical Standards

Specific attributes, characteristics and abilities are essential to practice nursing. Professional competency is the summation of many cognitive, affective and psychomotor skills. Students who enter the nursing program must be able to perform (with or without reasonable accommodations) these Technical Standards, which can be found within the application for the RN program as well as the information pages for the RN program.

Students who may require accommodations to perform the Technical Standards should contact the College's Office of Accessibility Services to request reasonable accommodations.

Students are asked to sign a form certifying that they have read, understand and are able to perform the Technical Standards of the Student Nurse when applying to the program. These Technical Standards are also reviewed at the program orientation session. Attendance at this session is required for all students who have been accepted to start the nursing program's technical courses.

### Licensure

Upon completion of the program, the graduate is eligible to apply to take the NCLEX-RN examination. Licensure is mandatory for practice as a RN. Candidates for licensure in Ohio must complete a criminal background check and disclose information related to any prior felony or misdemeanor, crime involving gross immorality or moral turpitude, violation of a drug law, and/or recent diagnosis or treatment of a psychotic disorder. The Ohio Board of Nursing will determine whether the candidate may take the licensing exam.

### Student Achievement Data

The nursing program publishes student achievement data that is required by the Accreditation Commission for Education in Nursing (ACEN). The data includes the graduates' success on the licensure examination, program completion rates, and employment rates.

**Licensure Examination Pass Rate** - Performance on the licensure examination for first-time test-takers  
2024 First-time test-takers from all cohorts (RN, LPN to RN, and Paramedic to RN) = 91.67%

**Program Completion Rate** - Percentage of students who graduate within a defined period of time. The definition used by ACEN for the program completion rate is the number of students who complete the program in no more than 150% of the stated program length beginning with enrollment in the first nursing course.  
2024 Completion rate for all cohorts (RN, LPN to RN, and Paramedic to RN) = 82%

**Job Placement Rate** - Percentage of graduates, responding to a graduate survey, who were employed in a position for which the program prepared them six (6) to twelve (12) months after graduating.  
2024 Job Placement rates for all graduates (RN, LPN to RN, and Paramedic to RN) = 100%

### Bachelor of Science in Nursing (BSN) Completion Options

Graduates of the Associate of Applied Science degree in Nursing are prepared to obtain licensure and employment as a registered nurse. Graduates are also prepared to continue their education and obtain a bachelor's degree in nursing. A number of colleges and universities have designed bachelor's nursing completion programs for associate degree prepared registered nurses. To investigate these programs affiliated with Clark State, please use the following link to take you to Clark State's transfer guides. [go.clarkstate.edu/transfer-guides/](https://go.clarkstate.edu/transfer-guides/)

### Learning Outcomes

Upon completion of an Associate of Applied Science degree in Registered Nursing, a graduate will be able to:

- **Patient Centered Care/Human Flourishing:** The student will engage in professional nursing practice, providing holistic, individualized, compassionate care that is patient centered and culturally and developmentally appropriate across the lifespan.
- **Evidence Based Practice and Quality Improvement/Spirit of Inquiry:** The student will incorporate a spirit of inquiry through the utilization of current best evidence to make clinical judgements for quality improvement.
- **Communication, Teamwork and Collaboration/Professional Identity:** The student will utilize effective communication with nursing and inter-professional teams, fostering an open communication, respect, and shared decision making.
- **Safety, Informatics and Technology/Nursing Judgement:** The Students will integrate informatics and technology to guide nursing judgement in making clinical decisions that minimize the risk of harm to patients and providers.
- **Leadership and Professionalism/Professional Identity:** The student will transition to the role of the professional nurse, incorporating legal, ethical, and professional standards.

### Admission Requirements

The Paramedic to RN program is a space limited program that admits students once a year in fall semester. In addition to applying to the college, students must apply to the program. Minimum grade point average requirements must be met prior to applying to the Paramedic to RN program. Applicants must complete the TEAS test (Test of Essential Academic Skills). Completion of the minimum requirements and application to the program does not guarantee admission. Entry to the nursing program is competitive and based on academic achievements. Detailed information about the Paramedic to RN program's competitive admission criteria, process, timeline, and forms are available on the RN - Paramedic to RN transition petition page.

### Additional Program Requirements

Prior to starting the program, students must successfully complete MST 1181, Nurse Aide Training course, its equivalent at a community college, or demonstrate proficiency of the knowledge and skills taught in that course. Students who wish to demonstrate proficiency by completion of a proficiency exam should contact the Director, Nursing Programs in the School of Health, Human, and Public Services office for proficiency exam information. Proficiency exams will be given after acceptance in to the program is confirmed.

Transition students must also meet health requirements, show proof of health insurance, have current healthcare provider cardiopulmonary resuscitation (CPR/BLS) certification, and meet criminal background check and drug screen requirements before starting the program. Students must update health requirements, criminal background checks, and drug screens in accordance with program and clinical agency policies. Additional information about these requirements is provided at the nursing program orientation sessions that are required for all students who have been accepted to start the program. Students must complete these requirements at their own expense. Students will be billed for liability insurance for each year of clinical courses as part of a course fee.

All students enrolled in NUR 2239 are required to enroll in the Virtual ATI review. All NUR 2239 students must successfully complete the specified areas within Virtual ATI NCLEX review for NUR 2239 course completion.

### Progression Requirements

In order to progress to the next nursing course, students must have successfully completed all prerequisite courses with a grade of C or higher.

### Graduation Requirements

To qualify for an associate degree, Paramedic to RN Transition students must have a cumulative grade point average (GPA) of 2.0 and have a grade of C or higher in all courses in the nursing curriculum.

Course #	Course Title	Credit Hours
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#### Spring

BIO 1131	Microbiology	3
BIO 2121	Anatomy and Physiology I *	4
ENG 1111	English I	3
PSY 1111	Introduction to Psychology	3

#### Summer

BIO 2122	Anatomy and Physiology II *	4
ENG 1112	English II	3
NUR 1121	Fundamentals of Pharmacology & Dosage- Calculation	1
NUR -	Articulated credit awarded ***	6

#### Fall

NUR 1122	Pharmacology II	1
NUR 1134	Behavioral Health Nursing	2.5
NUR 1137	Paramedic to RN Transition	2.5
NUR 1138	Adult Nursing for Paramedics	4.5

### Spring

PSY 2223	Lifespan Human Growth and Development	3
NUR 2234	Maternal-Newborn Nursing	2.5
NUR 2236	Adult Nursing II	6.5
NUR 1123	Pharmacology III	1

### Fall

STT 2640	Elementary Statistics I	3
NUR 2232	Children-Family Nursing	2.5
NUR 2239	Adult Nursing III ^	8
- -	NCLEX Capstone	1
	Total Credit Hours	65

\* BIO 2121 and BIO 2122, or the equivalent must be successfully completed within five years of entry into the first clinical nursing course. If older than five years, the courses must be repeated. NUR 1121 must be completed within one year of entry into first clinical nursing courses. If older than one year, the course must be repeated.

\*\*\* Students will be awarded 6 semester hours of articulated credit for advanced placement after successful completion of NUR 1137, Medic to RN Transition, and NUR 1138, Adult Nursing for Paramedics.

^The 3 day NCLEX review only offered on Springfield campus during NUR 2239.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory requirements. Individuals taking college preparatory education courses or attending school part-time will require additional semesters of study.

The non-nursing courses in the program are available in an online/hybrid as well as traditional format. The classroom components of the nursing courses are offered in online or hybrid formats. The on-site lectures and labs for the hybrid nursing courses are scheduled at Clark State's Greene Center campus. Students enrolled in online nursing courses are required to take some online exams in a proctored environment. Students are required to attend assigned lab and clinical learning experiences.

## Respiratory Care (Consortium Program)

**Classes must be taken at both Clark State and Rhodes State College to complete this program.**

Clark State joined the Northwest Ohio Allied Health Education Consortium in order to expand its allied health offerings, including an associate degree in Respiratory Care to Clark State students. This consortium allows Clark State students to complete their general education and basic classes through Clark State at one of its campuses or online. Students are also enrolled at Rhodes State. Technical courses are taught by Rhodes State faculty through distance learning on the Clark State campus. Students will need to travel to the Rhodes State campus in Lima for skills lab instruction and hands-on practice approximately once a week. Clinical learning experiences will be scheduled in regional healthcare facilities. A very important aspect of the Respiratory Care consortium program is that these clinical seats are reserved for qualified Clark State students living in Clark State's service area.

Information about the consortium is available at the consortium website. Specific information about the [Rhodes State's Respiratory Care program](#) can be found on the Rhodes State webpage.

The technical courses in the Respiratory Care program start each year in summer semester (May). Seats for the program are filled with qualified applicants on a continuous basis. Interested candidates are encouraged to apply early and seek qualified status as soon as possible to secure a seat as seats are limited. Clark State candidates for this program must also apply to Rhodes State online. Students should indicate they are applying to the Northwest Ohio Allied Health Education Consortium and that they are from Clark State by checking the appropriate boxes at the top of the application.

Skillful providers of respiratory care are in increasing demand. Respiratory Care Practitioners are prepared to administer pulmonary care under the direction of licensed physicians. Respiratory Therapists assist physicians in the diagnosis and treatment of lung and breathing disorders. These tasks include administering medical gases, breathing tests, medications by inhalation and drawing of blood for analysis. Knowledge of special life-support equipment and methods of monitoring the critically-ill patients are required of respiratory care practitioners. Individuals educated as respiratory therapists must complete a minimum of two years of education. Upon completing the minimum education, graduates are eligible to sit for national board examinations to become a certified respiratory therapist (CRT) and then a registered respiratory therapist (advanced level).

### Notice to Prospective or Current Respiratory Care Students

Students who have been convicted of certain felonies and/or misdemeanor offenses are not eligible to participate in clinical education experiences. A criminal conviction may also affect ability to obtain certifications. Students admitted to a program containing off campus clinical/practicum experiences will be required to submit to drug screening.

### Graduation Requirements

Academic qualification for the Respiratory Care program are listed below as items 1-5. These requirements must be met prior to being placed on the qualification list. All courses must be completed with a grade of "C" or better.

1. Appropriate American College Test (ACT) or college placement test scores or completion of college preparatory coursework as listed below.  
  
Test out of college preparatory writing coursework OR completion of ENG 0900 with a grade of C or higher.  
  
Test out of college preparatory reading coursework OR completion of ENG 0850 with a grade of C or higher.  
  
Test out of college developmental/elementary algebra OR completion of MTH 0650 with a grade of C or higher.  
  
ACT score of 20 or higher in science OR completion of high school chemistry and high school biology OR BIO 1410 with a C or higher within past five years.
2. A minimum 2.5 grade point average (GPA) for any previous college course work at the time of selection and matriculation.
3. Complete TEAS V test.
4. Attend a mandatory Allied Health Orientation session at Rhodes State and sign informed consent forms.
5. Have Clark State and other college transcripts with transferable college credits for basic and general education courses sent to Rhodes State.

**NOTE:** Applicants who do not meet academic requirements may plan a program of study under the guidance of an academic advisor to prepare for possible admission to the program.

Students will have additional requirements that will have to be met before entrance into the Respiratory Care program. These requirements include but are not limited to documented observations of a respiratory care practitioner in a hospital, physical, immunizations, background check, drug screen, CPR certification, and interview with the Respiratory Care program director.

Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 2122	Anatomy and Physiology II	4
CHM 1160	Introduction to Organic and Biological Chemistry	4
- -	RES 1090 (RSC)	2
- -	RES 1110 (RSC)	4
- -	RES 1010 (RSC)	3
<b>Spring</b>		
ENG 1111	English I	3
- -	RES 1020 (RSC)	3
- -	RES 1120 (RSC)	3
- -	RES 1410 (RSC)	1
<b>Summer</b>		
BIO 2121	Anatomy and Physiology I	4
MST 1105	Medical Terminology	2
MTH 1070	Quantitative Reasoning	or

MTH 1280	College Algebra	or
STT 2640	Elementary Statistics I	3
FYE 1101	College Success	1
--	RES 1000 (RSC)	0

#### Fall

--	RES 2110 (RSC)	0
--	RES 2410 (RSC)	3
--	RES 2550 (RSC)	0

#### Spring

SOC 1110	Introduction to Sociology	3
--	BHS 1560 (RSC)	1
--	RES 2420 (RSC)	0
--	RES 2510 (RSC)	1

#### Summer

--	RES 2230 (RSC)	2
--	RES 1420 (RSC)	2
--	RES 2100 (RSC)	3
	Total Credit Hours	52

## HEALTH CERTIFICATES

### Advanced Medical Coding Short-Term Technical Certificate

This certificate is available for students who need a quicker entry into the job market than what an associate's degree requires. Upon completion of this certificate students will be able to take the Certified Coding Associate (CCA) exam through the American Health Information Management Association (AHIMA). This certificate is fully embedded in the Health Information Technology Departmental Certificate as well as the Medical Office Administration associate degree. Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory requirements. All coding resources available in print and online.

This certificate will also provide the student with experience using ICD-10-CM, CPT, ICD-10-PCS and HCPCS. All coding resources available in print and online.

#### Degree Availability

Courses are offered in an eight (8) week format to be completed in either summer, fall or spring semesters. Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory requirements.

#### Learning Outcomes

Upon successful completion of the Advanced Medical Coding Short-Term Technical Certificate, a graduate will be able to:

- Analyze information and demonstrate comprehension.
- Code medical documents and assists in the management of patient's health information.
- Demonstrate accurate coding of procedures and diagnoses utilizing resources, such as, CPT, ICD-10-CM, ICD-10-PCS, and HCPCS.
- Demonstrate coding skills by qualifying to take the Certified Coding Associate (CCA) exam through (AHIMA) the American Health Information Management Association.

#### Course # Course Title Credit Hours

##### Summer

BIO 1105	Fundamentals of Anatomy and Physiology	3
MST 1105	Medical Terminology *	2

##### Fall

OAD 2301	CPT/ICD-10-PCS Coding	3
OAD 2302	ICD-10-CM Coding	3

##### Spring

OAD 2312	Advanced Medical Coding	3
OAD 2320	Medical Office Certification Review	1
MST 1140	Human Disease	3
	Total Credit Hours	18

\*MST 1105 must be successfully completed with a C or better within five years. If older than five years, the course must be completed.



## Clinical Medical Assisting Short-Term Technical Certificate

Clinical Medical Assistants are multi-skilled allied healthcare professionals who may administer medications, assist with minor procedures, record vital signs, take medical histories, prepare patients and rooms for examinations, handle laboratory specimens, and provide patient education. Clinical medical assistants act as supporting staff working alongside doctors and nurses to educate and help with patient care.

The primary goal of the Clinical Medical Assisting Short-Term Technical Certificate program is to prepare students to successfully enter the workforce as a medical assistant, with the relevant academic knowledge and technical skill to become nationally certified. In addition, students in the program will be responsive to the needs of the community and the role the medical assistant will play in meeting those needs.

Completion of this certificate will provide a pathway for non-credentialed medical assistants currently working in the field to receive formal training and education to successfully meet the eligibility criteria to apply for national certification through the National Healthcareer Association to become a Certified Clinical Medical Assistant (CCMA).

Students may fully apply this short-term certificate toward the completion of the Medical Assisting Associate Degree.

### Graduation Requirements

To be eligible for admission to the program, students must provide documentation of having worked as a medical assistant for a minimum of one year.

Academic requirements include:

**Reading:** Appropriate score on reading placement test (ACCUPLACER, ACT, or SAT) or completion of ENG 0850 with a C or higher. Students are excused from reading placement tests if they have obtained a C or higher in a college-level English composition course or an appropriate recent high school senior English grade in accordance with College policy.

**Writing:** Appropriate score on writing placement test (ACCUPLACER, ACT, or SAT) or completion of ENG 0900 with a grade of C or higher. Students are excused from writing placement tests if they have obtained a C or higher in a college-level English composition course or an appropriate recent high school senior English grade in accordance with College policy.

**Math:** Appropriate scores on math/algebra placement tests (ACCUPLACER, ACT, or SAT) or completion of MTH 0500 with a grade of C or higher within the past ten (10) years. Students are excused from math/algebra placement tests if they have obtained a C or better in a college-level math course within the past ten (10) years or an appropriate recent high school Algebra II grade in accordance with College policy.

**Grade Point Average (GPA):** A minimum cumulative Clark State transcript GPA of 2.0 (college preparatory courses are not included in the transcript GPA) as well as a minimum GPA of 2.0 in the courses in the Clinical Medical Assisting Curriculum.

Students who have met the admission requirements are eligible to start the Clinical Medical Assisting Short-Term Technical Certificate program's technical (MAS) course sequence. Students must contact the Medical Assisting Program Coordinator for academic advising and approval to enroll in the MAS courses. Students must maintain an overall C or 2.0 grade point average (GPA) for the courses in the Clinical Medical Assisting Short-Term Technical Certificate curriculum in order to be enrolled in the MAS courses.

In order to progress through the program, students must maintain an overall GPA of 2.0 and a grade of C or better in BIO-1105 and all MAS and MST courses. Admitted students who drop out, must complete and submit a request for reinstatement into the MAS courses. Students must have an overall GPA of 2.0 and may be required to retake technical courses that are more than one-to-two years old to be considered for reinstatement.

### Health and Background Check Requirements

All Clinical Medical Assisting Short-Term Technical Certificate program students must provide documentation of having worked for a minimum of one-year as a medical assistant. Students who are currently employed as a medical assistant already meet the health and background check requirements. Students who are not currently employed as a medical assistant must meet health requirements, obtain a criminal background check, and have current Basic Life Support (BLS)/professional cardiopulmonary resuscitation (CPR) certification prior to admission for the certificate.

Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 1105	Fundamentals of Anatomy and Physiology	3
MAS 1104	Exam Room Procedures I	2
MST 1105	Medical Terminology	2
MST 1160	Phlebotomy	2
MST 1161	Phlebotomy Lab	1
<b>Spring</b>		
MAS 1106	Clinical Medical Assisting II	3
MAS 1112	Pharmacology for the Medical Office	3
MST 1171	Introduction to Electrocardiography	2
PSY 1111	Introduction to Psychology	3
Total Credit Hours		21

## Electrocardiography Short-Term Technical Certificate

This certificate/area of specialization is focused on providing students with the basic knowledge and skills needed to perform an electrocardiogram (ECG) and recognize normal and common abnormal cardiac rhythms.

All courses may be applied to the Patient Care Technician departmental certificate, Multi-Skilled Healthcare one-year certificate, Associate of Technical Studies Multi-skilled Healthcare degree, and the Medical Assisting one-year certificate and associate degree programs. Courses may also enhance the skills of students in the associate degree nursing programs.

Students who wish to obtain a credential as a certified electrocardiography (ECG) technician may do so through an Ohio Department of Higher Education (ODHE) approved certification agency. To be eligible to test, the graduate must submit a copy of their Clark State certificate of completion of electrocardiography course work and documentation of successfully performing a specified number of 12-lead ECGs.

Additional information about obtaining these credentials will be provided in MST 1171 class.

### Learning Outcomes

Upon completion of the Electrocardiography certificate, the graduate will be able to:

- Demonstrate understanding of basic cardiac anatomy and physiology.
- Correlate ECG wave forms with the chemical and mechanical activity of the heart.
- Identify common abnormal tracings.
- Describe emergency interventions associated with common abnormal heart rhythms.
- Demonstrate equipment operation, troubleshooting, and recording of rhythm strips and multi-lead ECGs.

Course #	Course Title	Credit Hours
MST 1105	Medical Terminology	2
BIO 1105	Fundamentals of Anatomy and Physiology	3
EMS 1171	Basic Life Support: CPR	0.5
MST 1171	Introduction to Electrocardiography	2
	Total Credit Hours	7.5

Credit equivalencies may not exceed one half of the required technical course credits and MST 1171 must be completed at Clark State within the previous two years to receive this certificate. Credit equivalencies include articulated, experiential, transfer, and proficiency credit. In addition, all courses in the certificate must be completed with a grade of C or better.

## Health Information Technology Departmental Certificate

This certificate will provide the Health Information Technology student with experience using ICD-10-CM and ICD-10-PCS codes, preparing medical charts and records, scheduling appointments, handling insurance correspondence, preparing bills, and processing insurance forms in a medical office or facility. The student will also gain knowledge of medical terminology as well as a familiarization with HIPPA regulations. This certificate is fully embedded in the Medical Office Administration associate degree. Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory requirements. All coding resources available in print and online.

### Learning Outcomes

Upon successful completion of the Health Information Technology Departmental Certificate, a graduate will be able to:

- Compose and produce quality business documents using technology
- Demonstrate an understanding of medical terms and human diseases
- Code medical documents and assist in the management of patient's health information
- Apply knowledge of anatomy and physiology to work place setting

Course #	Course Title	Credit Hours
<b>Fall</b>		
OAD 1105	Business English ^	4
BIO 1105	Fundamentals of Anatomy and Physiology	3
EBE 1000	Employability Skills	1
ITS 1105	Computer Concepts and Software Applications ^*	3
MST 1105	Medical Terminology ^	2
<b>Spring</b>		
OAD 2301	CPT/ICD-10-PCS Coding	3
OAD 2302	ICD-10-CM Coding	3
OAD 2205	Electronic Health Records	3
ENG 2211	Business Communication	3
OAD 2703	Co-op Education/Internship	3
<b>Fall</b>		
OAD 2312	Advanced Medical Coding	3
OAD 2320	Medical Office Certification Review	1
MST 1140	Human Disease	3
	Total Credit Hours	35

^Proficiency test available.

\*Students should follow the recommended sequencing of courses, with consideration to the pre/corequisites, including college preparatory requirements.

## Medical Assisting Certificate

Medical assistants perform clinical and administrative tasks in physicians and other health practitioners' offices and outpatient facilities. Specific duties vary from office to office depending on the location and size of the practice and the practitioner's specialty. Administrative duties include answering telephones, greeting patients, scheduling appointments and laboratory services, updating and filing patients' medical records, filling out insurance forms, and handling billing and bookkeeping. Clinical duties include taking medical histories and recording vital signs, explaining procedures to patients, preparing patients for and assisting the physician during examinations, collecting and preparing laboratory specimens, sterilizing medical instruments, instructing patients on medications and special diets, preparing and administering medications as directed by a physician, drawing blood, taking electrocardiograms, removing sutures, and changing dressings.

The primary goal of the Medical Assisting Certificate program is to prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Completion of this certificate will provide the student with the administrative and clinical skills needed for entry-level positions as a medical assistant. Students may fully apply this one-year certificate toward the completion of the Medical Assisting Associate Degree.

### Embedded Certificates

This certificate program contains one or more embedded short-term certificates, which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Technical Standards & Occupational Risks

All students accepted into the Medical Assisting program must be able to perform the essential functions of the medical assistant with or without reasonable accommodations, as well as be aware of the occupational risks associated with the medical assisting profession. These essential functions, and occupational risks are linked to this program page on the College's website and are also provided to students via the Medical Assisting Student Handbook. Students are required to sign a form indicating they have reviewed these requirements and submit it to the Medical Assisting Program Coordinator when they enter the program.

### Liability Insurance

Students will be billed for liability insurance for the directed practice courses.

### Certification

The Clark State Medical Assistant Certificate program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon recommendation of the Medical Assisting Education Review Board (MAERB). Commission on Accreditation of Allied Health Education Programs/9355-113th St. N, #7709/Seminole, FL 33775/Telephone: 727-210-2350. Graduates of the certificate program successfully meet the eligibility criteria to apply for the national certification

process through the American Association of Medical Assistants or another nationally recognized certification credential.

### Student/Graduate Outcomes

The Medical Assisting Certificate Program at Clark State College has a five-year average of 93.62% for job placement for the years 2019-2023, and an exam passage rate of 100% for the 2022 graduates. Clark State provides support services to facilitate the successful completion of the program. Graduates and the employers who hire these graduates of the Medical Assisting Certificate Program at Clark State report a satisfaction rate of 100% for the past five years.

### Learning Outcomes

Upon completion of the Medical Assisting Certificate, a graduate will be able to:

- Communicate effectively with patients, families, and members of the health care team.
- Obtain vital signs
- Perform, assist, and follow-up on diagnostic tests and procedures.
- Instruct patients regarding health maintenance and disease prevention.
- Apply legal and ethical concepts.
- Apply basic billing, collection, insurance, coding, and manage care guidelines needed to maintain office bookkeeping.
- Perform clerical functions necessary to maintain medical office appointments, transcription, and medical records.
- Collect, transport, and process specimens.

### Graduation Requirements

Students must petition online (apply) for admission to the program. To be eligible to petition to the Medical Assisting program, students must meet the following academic requirements:

**Reading:** Appropriate score on reading placement test (ACCUPLACER, ACT, or SAT) or completion of college preparatory reading (ENG 0980 with a C or higher). Students are excused from reading placement tests if they have obtained a C or higher in a college-level English composition course or an appropriate recent high school senior English grade in accordance with College policy.

**Writing:** Appropriate score on writing placement test (ACCUPLACER, ACT, or SAT) or completion of college preparatory writing, (ENG 0980 with a grade of C or higher). Students are excused from writing placement tests if they have obtained a C or higher in a college-level English composition course or an appropriate recent high school senior English grade in accordance with College policy.

**Math:** Appropriate scores on math/algebra placement tests (ACCUPLACER, ACT, or SAT) or completion of MTH 0500 with a grade of C or higher within the past ten years. Students are excused from math/algebra placement tests if they have obtained a C or better in a college-level math course within the past ten years or an appropriate recent high school Algebra II grade in accordance with college policy.

Grade point average (GPA): A minimum cumulative Clark State transcript GPA of 2.0 (college preparatory courses are not included in the transcript GPA) as well as a minimum GPA of 2.0 in the courses in the Medical Assisting curriculum.

Students who have met the petition requirements and submitted a petition are eligible to start the the Medical Assisting program's technical (MAS) courses. Students must contact the Medical Assisting Program Coordinator for academic advising and approval to enroll in the MAS courses. Students must maintain an overall C or 2.0 grade point average (GPA) for the courses in the Medical Assisting curriculum in order to be enrolled in MAS courses.

In order to progress through the program, students must maintain an overall GPA of 2.0 and a grade of C or better in BIO 1105 and all MAS and MST courses. Admitted students who drop out must complete and submit a request for reinstatement into the MAS courses. Students must have an overall GPA of 2.0 and may be required to retake technical courses that are more than one to two years old to be considered for reinstatement.

### Health and Directed Practice Requirements

All Medical Assisting certificate students will complete 200 hours of supervised directed practice the final semester of the program.

All Medical Assisting students must meet health requirements, obtain a criminal background check, and have current Basic Life Support (BLS)/professional cardiopulmonary resuscitation (CPR) certification prior to entering the directed practice course. Other requirements may be necessary depending on clinical site placement.

### Graduation Requirements

Student must pass all the required courses, have a Clark State cumulative transcript grade point average (GPA) of 2.0 (college preparatory courses are not included) and have a C as a minimum grade in BIO 1105 and all MAS and MST courses.

### Course # Course Title Credit Hours

#### Fall

BIO 1105	Fundamentals of Anatomy and Physiology	3
FYE 1101	College Success	1
MAS 1101	Introduction to Administrative and Clinical Medical Assisting (new curriculum item)	4
MST 1101	Introduction to Health Care	3
MST 1105	Medical Terminology	2
MST 1160	Phlebotomy	2
MST 1161	Phlebotomy Lab	1

#### Spring

ENG 1111	English I	3
MAS 1105	Administrative Medical Assisting II	3
MAS 1106	Clinical Medical Assisting II	3
MAS 1115	Laboratory Procedures for the Medical Office	2
MAS 1112	Pharmacology for the Medical Office	3
MST 1171	Introduction to Electrocardiography	2

### Summer

PSY 1111	Introduction to Psychology	3
MAS 1117	Medical Assisting Directed Practice	2
MAS 1118	Clinical Perspectives Seminar	1
MAS 2100	Medical Assisting Certification Review	2
Total Credit Hours		40

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory requirements, will require additional semesters of study. In addition to the day program, offered at both the Springfield (fall semester start) and Xenia (spring semester start) campuses, the Medical Assisting program is offered as a part-time evening/weekend option on the Springfield campus with the MAS courses for this option starting in spring semester (January). Part-time evening/weekend students will still need to complete their unpaid, supervised Directed Practice clinical hours during the day. Students should consult their academic advisors for help in planning their schedules.

## Medical Coding Short-Term Technical Certificate

This certificate is available for students who need a quicker entry into the job market. Students receive instruction in CPT/ICD-10-PCS and ICD-10-CM coding, as well in medical terminology and A & P. This certificate is fully embedded in the Advanced Medical Coding Short-Term Technical Certificate, the Health Information Technology Departmental Certificate, as well as the Medical Office Administration associate degree.

### Degree Availability

Courses are offered in an eight (8) week format to be completed in either Fall or Spring semesters. Students should follow the recommended sequencing of courses, with consideration to the pre/co requisites, including college preparatory requirements. All coding resources available in print and online.

### Learning Outcomes

Upon successful completion of the Medical Coding Short-Term Technical Certificate, a graduate will be able to:

- Analyze information and demonstrate comprehension.
- Code medical documents and assists in the management of patient's health information.
- Demonstrate accurate coding of procedures and diagnoses utilizing resources, such as, CPT, ICD-10-CM, ICD-10-PCS, and HCPCS.

Course #	Course Title	Credit Hours
<b>Summer</b>		
BIO 1105	Fundamentals of Anatomy and Physiology	3
MST 1105	Medical Terminology *	2
<b>Fall</b>		
OAD 2301	CPT/ICD-10-PCS Coding	3
OAD 2302	ICD-10-CM Coding	3
	Total Credit Hours	11

\*MST 1105 must be successfully completed with a C or better within five years. If older than five years, the course must be repeated.

## Multi-Skilled Healthcare Certificate

The Multi-Skilled Healthcare certificate program is designed for individuals who are currently working in healthcare or who wish to enter the healthcare field. This program provides an introduction to the healthcare environment and provides training in more than one healthcare skill in order to meet the ever changing needs of the healthcare delivery system. Upon completion of this certificate students will have the skills needed to obtain employment in a variety of healthcare settings.

Students complete core courses and select courses from different specialty areas. The flexibility of the program allows students to choose specialty courses that meet their individual interests and needs. Many of these specialty areas have national certification or state licensure. Students who complete these specialty courses will be eligible to take appropriate certification or licensure examinations.

Courses within this program may also be taken by students in other degree or certificate programs and by healthcare professionals who wish to expand their knowledge and skills and/or increase marketability for employment.

Many of the courses within this program also meet course requirements for a variety of the College's associate degree programs. Students who wish to complete an associate degree may also choose the Associate of Technical Studies Multi-skilled Healthcare option and select courses which match their interests and/or career goals.

### Embedded certificates

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of the Multi-Skilled Healthcare Certificate, the graduate will be able to:

- Demonstrate knowledge of healthcare delivery systems and healthcare occupations.
- Communicate using correct medical terminology.
- Demonstrate computer skills essential for today's healthcare worker.
- Describe the structures and functions of the human body
- Identify common alterations in health and appropriate measures for prevention, detection, and management.
- Demonstrate proficiency in technical skills.
- Demonstrate knowledge of the interpersonal, ethical, and professional behaviors required in healthcare.

### Non-Academic Requirements

- Must meet specified health requirements prior to enrolling in clinical or directed practice courses.
- Will be billed for liability insurance when registering for specified clinical or directed practice courses.
- Will be required to obtain a criminal background check prior to enrolling in specified clinical or directed practice courses.



- Students should also be aware that clinical/directed practice sites may also require:
  - Random drug screening.
  - HIV testing, if exposed to blood-borne pathogens.--
  - Submission to treatment/counseling, if exposed to infectious diseases.

### Certificate Requirements

To qualify for a certificate in Multi-Skilled Healthcare students must pass all required courses, must obtain a grade of C or better in all technical courses, and have a minimum cumulative GPA of 2.0.

Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 1105	Fundamentals of Anatomy and Physiology	3
EMS 1171	Basic Life Support: CPR	0.5
FYE 1101	College Success	1
MST 1101	Introduction to Health Care	3
MST 1105	Medical Terminology	2
- -	Technical Elective(s) *	6
<b>Spring</b>		
ITS 1105	Computer Concepts and Software Applications	3
MST 1140	Human Disease	3
PSY 1111	Introduction to Psychology	3
- -	Technical Elective(s) *	6
<b>Summer</b>		
COM 1110	Interpersonal Communication I	or
COM 1120	Public Speaking I	or
COM 1170	Small Group Communication	3
ENG 1111	English I	3
	Total Credit Hours	36.5

\* Students must choose a total of 12 credit hours of technical elective course work from two or more of the following specialty areas. Students should verify that course prerequisites have been met prior to registering for a course.

### Diagnostic Procedures

- MST 1120 Medical Laboratory Orientation and Phlebotomy (2 credits) (must also register for MLT 1125)
- MST 1125 Medical Laboratory Orientation and Phlebotomy Laboratory (1 credit) (must also register for MLT1120)
- MST 1160 Phlebotomy (2 credits) (must also register for MST 1161)
- MST 1161 Phlebotomy Lab (1 credit) (must also register for MST 1160)
- MST 1171 Principles of Electrocardiography (2 credits)

### Direct Patient Care

- BIO 1110 Basic Human Nutrition (2 credits)
- MST 1181 Nurse Aide Training (4 credits)
- NUR 1110 Dosage Calculations (1 credit)
- PTA 1112 PTA Survey (1 credit)

### Emergency Care

- EMS 1100 EMT Theory and Practice (7 credits)

### Chemical Dependency

- SWK 1105 Chemical Dependency I: Pharmacology/Physiology of Psychoactive Substances (3 credits)
- SWK 2205 Chemical Dependency II: Assessment, Diagnosis, and Treatment Strategies (3 credits)
- SWK 2215 Chemical Dependency III: Co-occurring Disorders of Addiction & Mental Health (3 credits)

### Medical Coding

- OAD 2301 CPT/ICD-10-PCS Coding (3 credits)
- OAD 2302 ICD-10-CM Coding (3 credits)
- OAD 2312 Advanced Medical Coding (3 credits)
- OAD 2320 Medical Office Certification Review (1 credit)

### Healthcare Management

- ACC 1000 Accounting Concepts (3 credits)
- ACC 1100 Introduction to Financial Accounting (4 credits)
- MGT 1060 Organizational Behavior (3 credits)
- MGT 1120 Principles of Management (3 credits)

### Other Technical Elective

- EBE 1000 Employability Skills (1 credits)

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

## Nurse Aide Short-Term Technical Certificate

This 84 hour course introduces students to the principles and procedures of basic patient care for a variety of individuals. The course is regulated by the Ohio Department of Health and 100% attendance is required. Students must complete specific health requirements and a criminal background check at their own expense prior to the clinical experience.

After completing the lecture, skills lab, and clinical components of the class, students will be prepared for entry level employment in long term care, home healthcare, hospice, hospital setting(s), and many free standing clinics. Students will also receive a certificate of completion which will allow them to take the Ohio Nurse Aide state test. After passing both the written and skills components of the exam, the student will be placed on the Ohio Nurse Aide Registry.

Successful completion of this course within two years of entry into the first clinical nursing course of the LPN and RN programs meets the prerequisite nurse aide requirement of these programs.

### Learning Outcomes

Upon completion of the Nurse Aide Short-term Technical Certificate, the graduate will be able to:

- Form relationships, communicate, and interact competently on a one-to-one basis and in a group setting with patients/residents in various healthcare settings.
- Demonstrate sensitivity to the patient's/resident's physical, emotional, social, and mental health needs.
- Assist patients/residents in attaining and maintaining functional independence.
- Demonstrate observation and documentation skills needed to support the assessment and evaluation of the long-term care patient's/resident's health, physical condition, and well-being.
- Exhibit behavior in support and promotion of patient's/resident's rights.

Course #	Course Title	Credit Hours
MST 1181	Nurse Aide Training	4
	Total Credit Hours	4

## Paramedic Certification for Registered Nurses

This program is designed to provide education encompassing the entire Paramedic curriculum in an enhanced format. The registered nurse who has prior education and experience in emergency and/or critical care will have the opportunity to achieve advanced standing in the Paramedic Certification Program.

### Learning Outcomes

Upon completion of the Paramedic Certificate, a graduate will be able to:

- Demonstrate technical proficiency in all skills necessary to fulfill the role of entry-level paramedic.
- Communicate (written, verbal) effectively with patients, families, healthcare providers, and other supportive agencies.
- Exhibit ethical behaviors consistent with professional standards and employer expectations
- Demonstrate ability to integrate patho-physiologic and psycho-social principles and assessment findings to formulate a field impression and implement a treatment plan for the out-of-hospital patient.

### Graduation Requirements

Individuals seeking a career in emergency medical services should realize that to be successful, they must be emotionally stable, flexible and physically fit to perform the minimum entry-level job requirements.

Prior to entering EMS 2288, the student must meet the following entrance requirements:

- Complete a Request to Enter form, available on-line or from the Public Services office.
- Have Ohio EMT-Basic certification.
- Have current BLS/CPR provider, ACLS provider or instructor, and PALS provider or instructor certification. PHTLS or ITLS provider certifications are recommended.
- Complete physical exam and health requirements prior to attending clinical.
- Complete criminal background check and drug screen prior to attending clinical if required by clinical agency.
- Have active Ohio licensure/certification as RN, nurse practitioner, respiratory therapist or physician's assistant.

Course #	Course Title	Credit Hours
EMS 2288	Paramedic Theory/RNs	5
	Total Credit Hours	5

## Patient Care Technician Short-Term Technical Certificate

Patient care technicians are allied health professionals who provide direct patient care under the direction and supervision of a nurse. In addition to providing the direct patient care activities of the nurse aide/nursing assistant, patient care technicians are also prepared to perform electrocardiogram (ECG) and phlebotomy tasks. All courses may be applied to the Multi-Skilled Healthcare one-year certificate and Associate of Technical Studies-Multi-skilled Healthcare degree programs.

### Embedded certificates

This certificate contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

Course #	Course Title	Credit Hours
<b>Fall</b>		
EMS 1171	Basic Life Support: CPR	0.5
MST 1101	Introduction to Health Care	3
MST 1105	Medical Terminology	2
MST 1181	Nurse Aide Training *	4
<b>Spring</b>		
BIO 1105	Fundamentals of Anatomy and Physiology *	3
MST 1160	Phlebotomy	2
MST 1161	Phlebotomy Lab	1
MST 1171	Introduction to Electrocardiography	2
	Total Credit Hours	17.5

\* Students must complete specific health requirements and obtain a criminal background check at their own expense prior to participating in the clinical component of the course. Students will be billed for liability insurance when registering for the course.

\* BIO 1105 must be completed with a C or better within the last five years. If older than five years, the course must be repeated.

## Phlebotomy Short-Term Technical Certificate

These courses provide students with the knowledge and skill to collect blood samples by venipuncture and skin puncture.

Students who wish to obtain a credential as a certified phlebotomy technician may do so through the following Ohio Department of Higher Education (ODHE) approved certification agency. The Clark State coursework does NOT include a directed practice or practicum course and therefore the required number of successful punctures required for industry certification are not completed while enrolled in Clark State's Phlebotomy course. When registering to test, the graduate must submit a copy of their Clark State certificate of completion of phlebotomy course work as well as employer documentation of a specified number of successful venipunctures and capillary punctures.

### Learning Outcomes

Upon completion of the Phlebotomy certificate, graduates will be able to:

- Define legal issues related to phlebotomy.
- Describe the venous anatomy and veins and skin surfaces on which phlebotomy can be performed.
- Describe standard precautions as outlined by Center for Disease Control.
- Identify factors to be considered in venipuncture or skin puncture site selection.
- List the equipment and supplies needed to collect blood by venipuncture and skin puncture.
- Describe patient factors which influence the ability to perform venipuncture successfully.
- Discuss complications associated with venipuncture.
- Describe the steps in accurate specimen collection, documentation, and transportation procedures.
- Demonstrate successful venipunctures and skin punctures.

Course #	Course Title	Credit Hours
MST 1105	Medical Terminology	2
MST 1160	Phlebotomy	2
MST 1161	Phlebotomy Lab	1
	Total Credit Hours	5

All courses may be applied to the Patient Care Technician Departmental certificate, Multi-Skilled Healthcare and Medical Assisting one-year certificate and associate degree programs. Courses also enhance the skills of students enrolled in the associate degree nursing programs.

Credit equivalencies may not exceed one half of the required technical course credits and MST 1160 and MST 1161 must be completed at Clark State within the previous two years to receive this certificate. Credit equivalencies include articulated, experiential, transfer, and proficiency credit. In addition, all courses in the certificate must be completed with a grade of C or better.

## Practical Nursing Certificate

The 12-month Practical Nursing Certificate is approved by the Ohio Board of Nursing and the Ohio Department of Higher Education.

The program is also offered as a part-time evening-weekend option at the Beavercreek campus.

### Technical Standards

Specific attributes, characteristics, and abilities are essential to practical nursing. Professional competency is the summation of many cognitive, affective, and psychomotor skills. Students who enter the nursing program must be able to perform (with or without reasonable accommodations) these Technical Standards, which can be found within the PN informational pages on the Clark State website.

Students who may require accommodations to perform the essential functions should contact the College's Office of Accessibility Services to request reasonable accommodations.

Students are asked to sign a form certifying that they have read, understand, and are able to perform the Technical Standards of the Student Nurse at the program orientation session. Attendance at this session is required for all students who have been accepted to start the nursing program's technical courses.

### Licensure

Upon completion of the program, the graduate may apply to the Ohio Board of Nursing to take the NCLEX-PN Examination. Candidates for licensure in Ohio must disclose information related to any prior felony or misdemeanor, any crime involving gross immorality or moral turpitude, any violation of a drug law, and/or recent diagnosis or treatment of a psychotic disorder. The Ohio Board of Nursing will determine whether the candidate may take the licensing exam.

### Student Achievement Data

**Licensure examination pass rate-** Performance on the licensure examination for first-time test-takers.  
2023 first time-takers from all cohorts (PN Full-time Program and PN Part-time Evening Weekend Program) = 84.91%  
2024 first time-takers through quarter 1 = 95.24%

**Program Completion Rate -** Percentage of students who graduate within a defined period of time.  
2019 PN Full-time Day Program (Fall-Spring) = 85%  
2019 PN Full-time Day (Spring to Fall) = 90%  
2019 PN Part-time Evening Weekend Program (Fall to Fall) = 89.3%

### Learning Outcomes

Upon completion of the practical nurse program, the graduate will be able to:

- Contribute to the data collection of the health care client from newborn through aged within prescribed settings.
- Within the legal scope of practice for the Practical Nurse, participate in the planning, implementation, and evaluation of nursing care using the nursing process.

- Provide safe nursing care in prescribed situations using nursing skills and principles from the biological and behavioral sciences.
- Clearly and accurately report and document significant findings of the client's condition to the appropriate individual in a timely manner.
- Identify health care learning needs of assigned clients and assist in teaching the health care client.
- Function as an active member of the nursing care team and assume responsibility for continuing growth in nursing knowledge and skills.
- Demonstrate a code of behavior based on ethical principles and an understanding of the legal scope of practice of the Practical Nurse.

### Program Application (Petition) Requirements

The number of students admitted to the program each year is restricted due to the limited availability of clinical sites. All applicants are considered for admission by the date in which they complete all petitioning prerequisites and file a petition online to be placed on the waiting list. To be eligible to petition to the Practical Nursing program, the student must meet the following academic requirements:

Writing: Must have met by at least one method

- Compass or Accuplacer writing score that indicates the student has met requirements for ENG 0980.
- ENG 0980 College Writing Essentials with a grade of C or better.
- English scores of greater than or equal to an 18 on the ACT and/or a 450 on the SAT.
- Credit for a college level English composition course with a grade of "C" or better at Clark State.
- Credit for a college level English composition course with a grade of "C" or better taken at another college. The official transcript with the listing of the course must be on file at Clark State when the petition request is submitted.
- High school senior English grade that waived placement testing in accordance with College Policy.

Math / Algebra: Must have met by at least one method.

- Compass or Accuplacer math scores within the past five years that tests a student out of MTH 0500.
- MTH 0500 or STT 2640 with a grade of "C" or better within the past 5 years.
- Math score of greater than or equal to 17 on the ACT or 450 on the SAT within the past five years.
- Credit for a recent (within last five years) Ohio Transfer 36 (TR36) college level math course with a grade of "C" or better at Clark State.
- Credit for a recent (within last five years) TR36 equivalent college level math course with a grade of "C" or better taken at another college. The official transcript with the listing of the course must be on file at Clark State when the petition request is submitted.
- High school Algebra II grade that waived placement testing in accordance with College policy. High school course must be completed within the past five years
- Grade point average (GPA): A minimum cumulative Clark State transcript GPA of 2.0 (preparatory courses

are not included in the transcript GPA) as well as a minimum GPA of 2.0 in the courses in the practical nursing curriculum.

### Program Requirements

Prior to entering the Practical Nursing Program, students must have current professional cardiopulmonary resuscitation (CPR) provider status and current state-tested nurse aide credentials and/or have satisfactorily completed MST 1181 or its equivalent within the past two years. Please contact your nursing advisor for further information about these requirements.

Students must also meet health requirements, show proof of health insurance, and meet criminal background check and drug screen requirements before starting the program. Specific information will be presented at orientation after acceptance into the Practical Nursing program.

Students will be billed for liability insurance for the clinical courses.

### Progression and Graduation Requirements

To progress in the program and qualify for a certificate in Practical Nursing, students must have a cumulative Clark State College GPA of 2.0 and must have a C as a minimum grade in all courses in the practical nursing program curriculum.

Course #	Course Title	Credit Hours
<b>Summer</b>		
BIO 1105	Fundamentals of Anatomy and Physiology * ^	3
ENG 1111	English I	3
FYE 1101	College Success	1
MST 1105	Medical Terminology *	2
<b>Fall</b>		
LPN 1101	Nursing Fundamentals	9
LPN 1201	Disease Process and Diet Therapy	4
LPN 1301	Pharmacology	3
PSY 1111	Introduction to Psychology	3
<b>Spring</b>		
LPN 1401	Nursing Care of Adults	9
LPN 1501	Nursing Care of Women, Infants & Children	5
PSY 2223	Lifespan Human Growth and Development	3
	Total Credit Hours	45

\* BIO 1105 and MST 1105 must be successfully completed with a C or better within five years of entry into the first LPN course. If older than five years, the course must be repeated.

^ BIO 2121 AND BIO 2122, if completed within the past 5 years with a C or better, can be substituted for BIO 1105. The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals may require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

## Practical Nursing Certificate - Evening Weekend

The Practical Nursing program is also offered as a part-time evening-weekend option. The part-time evening-weekend option provides students who are unable to attend school full-time or during the day, another option for certificate completion. Students may enroll on a part-time basis, taking less than 12 credit hours during each semester. The program entrance requirements, learning outcomes, curriculum, clinical, graduation and licensure requirements are the same as listed for the full-time program. Students will need to travel outside of Greene County, generally to Clark County, for some clinical experiences.

### Technical Standards

Specific attributes, characteristics, and abilities are essential to practice nursing. Professional competency is the summation of many cognitive, affective, and psychomotor skills. Students who enter the nursing programs must be able to perform (with or without reasonable accommodations) these Technical Standards, which are linked to this program page on the College's website.

Students who may require accommodations to perform the essential functions should contact the College's Office of Accessibility Services to request reasonable accommodations.

Students are asked to sign a form certifying that they have read, understand, and are able to perform the Technical Standards of the Student Nurse at the program orientation session. Attendance at this session is required for all students who have been accepted to start the nursing program's technical courses.

### Licensure

Upon completion of the program, the graduate may apply to the Ohio Board of Nursing to take the NCLEX-PN Examination. Candidates for licensure in Ohio must obtain a criminal background check and disclose information related to any prior felony or misdemeanor, any crime involving gross immorality or moral turpitude, any violation of a drug law, and/or recent diagnosis or treatment of a psychotic disorder. The Ohio Board of Nursing will determine whether the candidate may take the licensing exam.

### Student Achievement Data

**Licensure examination pass rate-** Performance on the licensure examination for first-time test-takers.  
 2019 first time-takers from all cohorts (PN Full-time Program and PN Part-time Evening Weekend Program) = 85.95%  
 2019 PN Full-time Day Program (Fall to Spring) = 97.2%  
 2019 PN Full-time Day (Spring to Fall) = 84.71%  
 2019 PN Part-time Evening Weekend Program (Fall to Fall)= 85.71%

**Program Completion Rate -** Percentage of students who graduate within a defined period of time.  
 2019 PN Full-time Day Program (Fall-Spring) = 85%  
 2019 PN Full-time Day (Spring to Fall) = 90%



## Learning Outcomes

Upon completion of the evening weekend Practical Nursing Certificate, the graduate will be able to:

- Contribute to the data collection of the health care client from newborn through aged within prescribed settings.
- Within the legal scope of practice for the Practical Nurse, participate in the planning, implementation, and evaluation of nursing care using the nursing process.
- Provide safe nursing care in prescribed situations using nursing skills and principles from the biological and behavioral sciences.
- Clearly and accurately report and document significant findings of the client's condition to the appropriate individual in a timely manner.
- Identify health care learning needs of assigned clients and assist in teaching the health care client.
- Function as an active member of the nursing care team and assume responsibility for continuing growth in nursing knowledge and skills.
- Demonstrate a code of behavior based on ethical principles and an understanding of the legal scope of practice of the Practical Nurse.

## Program Application (Petition) Requirements

The number of students admitted to the program each year is restricted due to the limited availability of clinical sites. All applicants are considered for admission by the date in which they complete all petitioning prerequisites and file a petition online to be placed on the waiting list.

To be eligible to petition to the Practical Nursing program, the student must meet the following academic requirements:

Writing: Must have met by at least one method

- Compass or Accuplacer writing score that indicates the student has met requirements for ENG 0980.
- ENG 0980 College Writing Essentials with a grade of C or better.
- English scores of greater than or equal to an 18 on the ACT and/or a 450 on the SAT.
- Credit for a college level English composition course with a grade of "C" or better at Clark State.
- Credit for a college level English composition course with a grade of "C" or better taken at another college. The official transcript with the listing of the course must be on file at Clark State when the petition request is submitted.
- High school senior English grade that waived placement testing in accordance with College Policy.

Math/Algebra: Must have met by at least one method

- Compass or Accuplacer math scores within the past five years that tests a student out of MTH 0500.
- MTH 0500 or STT 2640 with a grade of "C" or better within the past 5 years.
- Math score of greater than or equal to 17 on the ACT or 450 on the SAT within the past five years.

- Credit for a recent (within last five years) Ohio Transfer 36 (TR36) college level math course with a grade of "C" or better at Clark State.
- Credit for a recent (within last five years) TR36 equivalent college level math course with a grade of "C" or better taken at another college. The official transcript with the listing of the course must be on file at Clark State when the petition request is submitted.
- High school Algebra II grade that waived placement testing in accordance with College policy. High school course must be completed within the past five years.

Grade point average (GPA): A minimum cumulative Clark State transcript GPA of 2.0 (college preparatory courses are not included in the transcript GPA) as well as a minimum GPA of 2.0 in the courses in the practical nursing curriculum.

## Program Requirements

Prior to entering the Practical Nursing Program, students must have current professional cardiopulmonary resuscitation (CPR) provider status and current state-tested nurse aide credentials and/or have satisfactorily completed MST 1181 or its equivalent within the past two years. Please contact your nursing advisor for further information about these requirements.

Students must also meet health requirements, show proof of health insurance, and meet criminal background check and drug screen requirements before starting the program. Specific information will be presented at orientation after acceptance into the Practical Nursing program.

Students will be billed for liability insurance for the clinical courses.

## Progression and Graduation Requirements

To progress in the program and qualify for a certificate in Practical Nursing, students must have a cumulative Clark State College GPA of 2.0 and must have a C as a minimum grade in all courses in the practical nursing program curriculum.

Course #	Course Title	Credit Hours
<b>Spring</b>		
ENG 1111	English I	3
FYE 1101	College Success	1
MST 1105	Medical Terminology *	2
PSY 1111	Introduction to Psychology	3
<b>Summer</b>		
BIO 1105	Fundamentals of Anatomy and Physiology * ^	3
PSY 2223	Lifespan Human Growth and Development	3
<b>Fall</b>		
LPN 1201	Disease Process and Diet Therapy	4
LPN 1301	Pharmacology	3
<b>Spring</b>		
LPN 1101	Nursing Fundamentals	9

**Summer**

LPN 1501	Nursing Care of Women, Infants & Children	5
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**Fall**

LPN 1401	Nursing Care of Adults	9
	Total Credit Hours	45

\*BIO 1105 and MST 1105 must be successfully completed with a grade of C or better within five years of entry into the first LPN course. If older than five years, the course must be repeated.

^ BIO 2121 AND BIO 2122, if completed within the past 5 years with a C or better, can be substituted for BIO 1105. The curriculum plan is designed for students who have completed all prerequisites and have no college preparatory recommendations. All LPN prefix courses are at the Clark State Beavercreek location.

# SOCIAL SCIENCES/HUMAN SERVICES AND PUBLIC SAFETY

## Addiction and Recovery Services

The Associate of Applied Science degree in Addiction and Recovery Services, is a specialty degree offered through the Social Services Department. This degree has an intense focus on addiction recovery and co-occurring disorders. Co-occurring disorders include addiction and mental health issues clients may deal with simultaneously. This is a pathway directly to the Licensed Chemical Dependency Counselor II (LCDCII) license while also earning the Chemical Dependency Counselor Assistant (CDCA) certification. This degree includes 2000 hours of field experience in the form of extended practicum placements as well as specific educational competencies needed to sit for the State Board exam for the LCDC II immediately upon completion.

### Practicum Coursework

Students will be billed for liability insurance for the practicum courses. The student may be requested by the practicum site to complete a criminal background check and a drug screen. Students should contact the practicum instructor with any questions regarding practicum.

### Learning Outcomes

- Apply and critique how the 8 Domains of Competency are utilized within a social service agency that provides treatment to clients with substance abuse disorders.
- Assess the needs of those with co-occurring disorders and provide proper treatment and referral for this population.
- Demonstrate skills in screening, assessing, and developing treatment plans for client populations in the field of substance use disorders and recovery.
- Complete professional documentation reports, including progress notes, psychosocial histories, and mental status evaluations, as well as other professional documentation.
- Identify and describe the physiological, psychological, and sociological effects of drugs on individuals, families, and societies.
- Utilize research on substance use disorders to identify evidence-based practices.
- Demonstrate self-awareness and competent use of cultural identify and advocacy models to address the needs of individuals and populations affected by substance abuse.

### Academic Requirements

Persons seeking a career in social services should recognize that to be successful, they must be emotionally stable, creative, and flexible. A social services professional must be able to work effectively with diverse groups of people and individuals with a wide variety of ages, racial and cultural backgrounds, and life situations. ENG 1111 must be completed with a grade of C or better before enrolling in additional courses. Students will be expected to meet minimum behavioral expectations in order to continue in the Social Services program.

### Math Requirements

Students should speak with their faculty advisor regarding whether MTH 1060, Business Math or MTH 1070, Quantitative Reasoning should be taken in order to meet the program's math requirement if they are considering completing their bachelor's degree.

### Graduation Requirements

In order to graduate, students must obtain a grade of C or better in all SWK courses, demonstrate professional and ethical behavior, effective oral and written communication, professional documentation skills, basic listening skills, and an awareness of personal biases as they affect clients.

### Transfer Options

Students enrolled in the Addiction and Recovery Services Associate of Applied Science degree are preparing for employment upon graduation from the program. However, many students are also interested in completing a bachelor's degree. This program is transferable to various bachelor's programs including Clark State's Bachelor's in Addiction and Intergrated Treatment studies.

Please see your academic advisor for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
SWK 1105	Chemical Dependency I: Pharmacology and Physiology of Psychoactive Substances	3
ENG 1111	English I	3
FYE 1101	College Success	1
SWK 1110	Peer Support Fundamentals I	or
SWK 1112	Family Peer Support Fundamentals	4
<b>Spring</b>		
SWK 2205	Chemical Dependency II: Assessment, Diagnosis, and Treatment Strategies	3
SWK 1136	Affective Education and Group Treatment	3
PSY 1111	Introduction to Psychology	3
SWK 2260	Multicultural Competence in a Diverse World	3
<b>Summer</b>		
PSY 2223	Lifespan Human Growth and Development	3
SOC 1110	Introduction to Sociology	3
- -	Art/Humanities Elective*	3
<b>Fall</b>		
SWK 2270	Addictions and Recovery Practicum I	2
SWK 2293	Addiction and Recovery Seminar I	1
SWK 2218	Social Work and Mental Health	3
ITS 1105	Computer Concepts and Software Applications	3
MTH 1070	Quantitative Reasoning	or
MTH 1280	College Algebra	or
STT 2640	Elementary Statistics I	3

### Spring

SWK 2274	Addiction and Recovery Practicum II	5
SWK 2294	Addiction and Recovery Seminar II	1
SWK 2215	Chemical Dependency III: Co-Occurring Disorders of Addiction and Mental Health	3
SWK 2225	Chemical Dependency IV: Service Coordination	3

### Summer

SWK 2275	Addiction and Recovery Practicum III	5
SWK 2295	Addiction and Recovery Seminar III	1
	Total Credit Hours	62

\*Any 3-credit hour courses with ART, ASL, ENG, FRN, HST, HUM, MUS, PHL, SPN, THE prefix.

## Associate of Arts General Transfer - Social Services Pathway

The Social Services Pathway of the Associate of Arts degree emphasizes transfer preparation for pursuing a bachelor's degree in social work. An Associate of Arts degree provides the foundational knowledge and skills in general education that are often required to pursue a Bachelor's degree. Courses in this pathway focus on social welfare, sociology, and chemical dependency. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts program, particularly at state institutions in Ohio. It is not designed to prepare students for the skills needed to obtain employment in the field of social work upon completion of the associate degree. Students who wish to obtain more immediate employment in the field of social work should consider the SWK Assistant Associate of Applied Science degree that is offered at Clark State.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in Social Services, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
SWK 1100	Introduction to Social Work	3
PSY 1111	Introduction to Psychology	3
BIO 1410	Fundamentals of Biology	4
<b>Spring</b>		
ENG 1112	English II	3
STT 2640	Elementary Statistics I	3
SOC 1110	Introduction to Sociology	3
HST 1110	Western Civilization to 1600	3
BIO 1420	Global Biology	4

## Fall

COM 1110	Interpersonal Communication I	or
COM 1120	Public Speaking I	3
SWK 2230	Introduction to Social Welfare	3
SOC 2240	Racial and Cultural Minorities	or
SOC 2230	Social Problems	or
SWK 2260	Multicultural Competence in a Diverse World	3
PLS 1100	Introduction to American Politics	3
- -	ASL, SPN, or FRN See Catalog	3

## Spring

SWK 1105	Chemical Dependency I: Pharmacology and Physiology of Psychoactive Substances	3
HST 1120	Western Civilization Since 1600	3
ENG 2300	Great Books: World Literature	3
PHL 2000	Critical Thinking	3
- -	ASL, SPN, or FRN See Catalog	3
	Total Credit Hours	60

All students pursuing the Associate of Arts degree are required to complete at least nine credit hours in courses numbered 2000 or higher. These classes are taken as a part of the requirements within the concentration or elective area.

In recognition of the growing importance of global awareness, the Associate of Arts degree requires students to take at least four courses with significant international content. Courses meeting this requirement are identified in the College catalog and are fulfilled as a part of the requirements within the concentration or elective area.

## Criminal Justice Technology - Law Enforcement

The Criminal Justice program is comprised of a curriculum that is current and relevant to the needs of criminal justice professionals. Society demands highly educated and well qualified candidates that meet and exceed the standards of local, state, and federal, law enforcement agencies. Criminal Justice is a multi-million dollar industry.

Individuals violate laws and require legal interventions and sanctions regardless of the economic conditions. Courses are taught by individuals who have been or currently are practitioners, providing students with instruction from faculty who combine classroom with real work experiences.

### Law Enforcement Concentration

Job opportunities are plentiful in criminal justice. Advances in Technology and the emphasis on homeland security have fueled a demand for law enforcement professionals to be knowledgeable regarding not only law enforcement protocols but relating to the communities in which they serve. Individuals interested in pursuing law enforcement certification upon completion of an OPOTA approved Police Academy may defer eight (8) courses in the criminal justice program that are addressed through academy instruction. Once the academy coursework is completed successfully, full credit will then be applied to student's transcript which will allow the student to begin a law enforcement path sooner.

All Students looking to enroll in CRJ 1100, Introduction to Criminal Justice, or COR 1100, Introduction to Corrections, must meet with the [Program Coordinator, Wendy Holt](#), before registering for these classes.

### Learning Outcomes

Upon completion of an associate degree in criminal justice, a graduate will be able to:

- Apply critical thinking and problem-solving skills to Criminal Justice related decisions
- Employ professional behaviors reflective of the criminal justice professions
- Demonstrate techniques and technology specific to criminal justice
- Formulate effective communication techniques
- Display behaviors that reflect respect for and sensitivity to individual differences while working with citizens, families and coworkers
- Identify community support systems that can be utilized by the criminal justice community

### Scholastic Preparation

Anyone considering a criminal justice career should recognize that employment involves meeting physical requirements, which vary greatly among different agencies.

A conviction of any of the crimes below disqualifies individuals from the program:

- Any felony
- Domestic violence or reduced charge stemming from a domestic violence incident



- Any person currently registered as a sex offender, child-victim offender, or arson offender
- Misdemeanor convictions of violence, theft, or fraud crimes
- Other criminal or serious traffic convictions may prevent graduates from obtaining employment in some positions/facilities. Any questions should be directed to the Criminal Justice Program Coordinator.

Course #	Course Title	Credit Hours
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#### Fall

CRJ 1100	Introduction to Criminal Justice	3
CRJ 1115	Victimology	3
ENG 1111	English I	3
FYE 1101	College Success	1
CRJ 1120	Juvenile Procedures	3
SOC 1110	Introduction to Sociology	3

#### Spring

PSY 1111	Introduction to Psychology	3
CRJ 1123	Patrol Operations	3
COM 1110	Interpersonal Communication I	or
COM 1120	Public Speaking I	3
ENG 1112	English II	3
SWK 1105	Chemical Dependency I: Pharmacology and Physiology of Psychoactive Substances	3
CSE 1110	Introduction to Cybersecurity	3

#### Fall

CRJ 2216	Community Relations	3
CRJ 2225	Forensic Science	4
CRJ 2228	Criminal Investigation	3
CRJ 2250	Community Resources	3

#### Spring

CRJ 2235	Social Justice	3
CRJ 2201	Police Administration (new curriculum item)	3
CRJ 2240	Criminal Law	3
- -	Math Elective - Choose from any college level math or statistics course.	3
CRJ 2280	Practicum	3
- -	Arts/Humanities Elective**	3
	Total Credit Hours	65

## Criminal Justice Technology-Corrections

The Criminal Justice program is comprised of a curriculum that is current and relevant to the needs of criminal justice professionals. Society demands highly educated and well qualified candidates that meet and exceed the standards of local, state, and federal law enforcement agencies. Criminal Justice is a multi-million dollar industry.

Individuals violate laws and require legal interventions and sanctions regardless of the economic conditions. Courses are taught by individuals who have been or currently are practitioners, providing students with instruction from faculty who combine classroom with real work experiences.

### Corrections Concentration

The Corrections Concentration offers students a broad overview of the correctional system. The program prepares students for immediate employment in federal, state, and local correctional facilities. Graduates may expect to qualify for entry-level positions as corrections officers, parole officers, and probation officers, as well as investigators and youth counselors.

All Students looking to enroll in CRJ 1100, Introduction to Criminal Justice or COR 1100, Introduction to Corrections must meet with [Program Coordinator, Wendy Holt](#), before registering for these classes.

### Learning Outcomes

Upon completion of an associate degree in criminal justice, a graduate will be able to:

- Apply critical thinking and problem-solving skills
- Employ professional behaviors reflective of the criminal justice professions
- Demonstrate techniques and technology specific to criminal justice
- Formulate effective communication techniques
- Display behaviors that reflect respect for and sensitivity to individual differences while working with citizens, families and coworkers
- Identify community support systems that can be utilized by the criminal justice community

### Scholastic Preparation

Anyone considering a criminal justice career should recognize that employment involves meeting physical requirements, which vary greatly among different agencies.

A conviction of any of the crimes below is a disqualifier for this program:

- Any felony
- Domestic violence or reduced charge stemming from a domestic violence incident
- Any person currently registered as a sex offender, child-victim offender, or arson offender
- Misdemeanor convictions of violence, theft, or fraud crimes
- Other criminal or serious traffic convictions may prevent graduates from obtaining employment in some positions/facilities. Any questions should be directed to the Criminal Justice Program Coordinator.

Course #	Course Title	Credit Hours
<b>Fall</b>		
CRJ 1100	Introduction to Criminal Justice	3
CRJ 1115	Victimology	3
ENG 1111	English I	3
FYE 1101	College Success	1
SOC 1110	Introduction to Sociology	3
COR 1100	Introduction to Corrections	3
<b>Spring</b>		
COR 1105	Probation and Parole	3
PSY 1111	Introduction to Psychology	3
COM 1110	Interpersonal Communication I	or 3
COM 1120	Public Speaking I	3
ENG 1112	English II	3
SWK 1105	Chemical Dependency I: Pharmacology and Physiology of Psychoactive Substances	3
<b>Fall</b>		
COR 1130	Adult/Juvenile Corrections	3
CRJ 2250	Community Resources	3
SOC 2220	Comparing Cultures	3
CRJ 1120	Juvenile Procedures	3
<b>Spring</b>		
CRJ 2235	Social Justice	3
CRJ 2216	Community Relations (new curriculum item)	3
- -	Math Elective - Choose from any college level math or statistics course.	3
COR 2250	Correctional Case Management	3
COR 2285	Corrections Practicum	3
- -	Arts/Humanities Elective**	3
	Total Credit Hours	61

## Emergency Medical Services

Emergency medical services (EMS) are expanding rapidly with more opportunities developing for emergency medical technicians (EMTs) and paramedics. Although working in EMS has traditionally meant working for a fire department, rescue squad, or ambulance, there are also positions in education, management, research, communications, support services, and health agencies. Our program introduces students to a variety of emergency care situations and experiences both in the hospital setting and on emergency vehicles. Both day and evening courses are available.

### Embedded Certificates

Clark State offers an associate degree and several certification programs. The certification courses may be taken separately or in conjunction with the associate degree program. This degree program contains one or more embedded certificates, which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Articulated Credit

Students who have current Ohio EMT-Paramedic certification and wish to obtain an associate degree in Emergency Medical Services will be granted articulated credit towards the first level EMS courses in the curriculum. These will be granted after the student has completed 15 hours of semester coursework towards their EMS degree at Clark State. Students who wish to be granted articulated credit must submit an EMS Articulated Credit Application form and appropriate documentation to the EMS Program Coordinator.

### Learning Outcomes

Upon completion of an associate degree in Emergency Medical Services, a graduate will be able to:

- Demonstrate technical proficiency in skills necessary to fulfill the role of entry-level paramedic.
- Communicate (written, verbal) effectively with patients, families, healthcare providers, and other supportive agencies.
- Exhibit ethical behaviors consistent with professional standards and employer expectations.
- Demonstrate ability to integrate patho-physiologic and psycho-social principles and assessment findings to formulate a field impression and implement a treatment plan for the out-of-hospital patient.
- To prepare competent entry level paramedics in the cognitive (knowledge), domains with or without exit points at the Advanced Emergency Medical Technician and/or Emergency Medical Technician, and/or Emergency Medical Responder levels.

### Scholastic Preparation

Individuals seeking a career in emergency medical services should realize that to be successful, they must be emotionally stable, flexible and physically fit enough to perform the minimum entry-level job requirements.

Prior to entering EMS 1131, the student must meet the following entrance requirements:

- Pass ACCUPLACER Reading placement tests with scores testing out of college preparatory reading and writing or pass with a C or better in an English developmental course ENG 0980.
- Pass Quantitative Reasoning test with a score of 246 or better, or pass with a grade of C or better the with a score of 246 or better, or pass with a grade of C or better MTH 0500.
- Have Ohio EMT-Basic certification.
- Have current CPR provider certification.

Prior to scheduling clinical rotations:

- Complete physical exam and health requirements.
- Complete criminal background check requirements.
- Complete drug screen requirement if required by assigned clinical agency.

### Prior Learning Assessment

Students who have prior education or training equivalent to the paramedic course of study may demonstrate knowledge acquisition and practical skill competency in a series of steps that may absolve the student from attendance at the formalized paramedic sequence of classes. Contact the EMS Program Coordinator for more information on this Prior Learning Assessment policy.

### Graduation Requirements

Students must have a high school diploma or its equivalent. In addition, each student must take reading, writing and math placement tests and may need to take college preparatory courses if indicated by placement testing scores.

### Technical Standards

All students accepted into the Emergency Medical Services programs must be able to meet the General Knowledge and Skills Requirements of EMS Personnel with or without reasonable accommodations. These requirements are linked to this program page on the College's website and are also provided to students via the EMS Policy Manual. Students are required to sign a form indicating they have reviewed these requirements and submit that form to the EMS Program Coordinator when they enter the program.

### Graduation Requirements

To qualify for an Associate Degree, Emergency Medical Services students must pass all the required courses, have a cumulative GPA of 2.0 and have a C as a minimum grade in all the technical EMS courses. BIO 1105 be completed with a grade of C or higher.

### Course # Course Title Credit Hours

#### Spring

BIO 1105	Fundamentals of Anatomy and Physiology	3
ENG 1111	English I	3
MST 1105	Medical Terminology	2
EMS 1100	EMT Theory & Practice	7
EMS 1171	Basic Life Support: CPR	0.5
FYE 1101	College Success	1

### Fall

PSY 1111	Introduction to Psychology	3
EMS 1112	Paramedic Hospital Practice I	1
EMS 1122	Paramedic Field Practice I	1
EMS 1131	Paramedic Theory I	6
EMS 1141	Paramedic Practical Skills Lab I	1.6
- -	Humanities/Social Science Elective*	3

### Spring

COM 1110	Interpersonal Communication I	3
EMS 1114	Paramedic Hospital Practice II	1
EMS 1124	Paramedic Field Practice II	1
EMS 1133	Paramedic Theory II	6
EMS 1143	Paramedic Practical Skills Lab II	1.7

### Summer

PSY 2223	Lifespan Human Growth and Development	3
EMS 1116	Paramedic Hospital Practice III	1
EMS 1126	Paramedic Field Practice III	1
EMS 1145	Paramedic Practical Skills Lab III	1.7
- -	Math Elective**	3
EMS 1134	Paramedic Theory III (new curriculum item)	3

### Fall

EMS 1128	Paramedic Field Practice IV	1
EMS 1136	Paramedic Theory IV (new curriculum item)	3
- -	Technical Elective***	3
	Total Credit Hours	64.5

Students who have current Ohio EMT Advanced Certification are given in-class credit for clinical skills previously obtained.

\*A complete listing of humanities and social science electives can be found in the College Catalog.

\*\*Math electives include courses that have course codes of MTH or STT.

\*\*\*Technical electives include: FFC 1070 (1050,1060), FFC 2020 (2010), FFC 2070 (2060), FFC 2080 (2090), MGT 1060, SWK 1105.

## Social Work Assistant

Social work education is at the core of the Social Work Assistant program. Social work is devoted to helping people function as well as they can within their environments. Areas of employment include alcohol and drug treatment, children's services, juvenile services, mental health, mental retardation and developmental disabilities, and public assistance. The field placement portion of the curriculum provides 420 hours of supervised learning experiences in local social services agencies.

### Practicum Coursework

Students will be billed for liability insurance for the practicum courses. The student are required to receive a criminal background check with in a one year of starting a practicum.

### Registration as a Social Work Assistant

Students of this program who have achieved a grade of C or better in all Social Work Assistant courses are eligible to be registered as Social Work Assistant by the Ohio Counselor and Social Worker Board. Graduates are required to complete a criminal background check when applying for the Social Work Assistant Certificate and when applying for positions in social work.

### Learning Outcomes

- Develop skills in screening, assessing and developing treatment plans for client populations in the social services and/or addictions field.
- Demonstrate the ability to integrate social work and/or addictions theory with practical applications.
- Adhere to a professional code of ethics and policy/procedural standards in working with clients and coworkers.
- Complete professional documentation reports, including progress notes, psycho/social histories and mental status evaluations, as well as other professional documentation.

### Academic Requirements

Persons seeking a career in social services should recognize that to be successful, they must be emotionally stable, creative, and flexible. A social services professional must be able to work effectively with diverse groups of people and individuals with a wide variety of ages, racial and cultural backgrounds, and life situations. ENG 1111 and SWK 1100 must be completed with a grade of C or better before enrolling in additional courses. Students will be expected to meet minimum behavioral expectancies in order to continue in the Social Services program.

Math Requirements: Students should speak with an advisor regarding whether MTH 1060, Business Mathematics, or STT 2640, Elementary Statistics I or an OTM math course should be taken in order to meet the program's math requirement when considering transferring to a university setting to complete their bachelor's degree.

### Graduation Requirements

In order to graduate, students must obtain a C or better in all SWK courses and demonstrate professional ethical behavior, effective oral and written communication, professional documentation skills, basic listening skills, and an awareness of personal biases as they affect clients.

### Transfer Options

Students enrolled in the Social Work Assistant Associate of Applied Science degree are preparing for employment upon graduation from the program. However, many of these students are also interested in completing a bachelor's degree in Social Work. Some colleges and universities have designed bachelor's completion programs for students who have completed their associate degree in social work. Local programs include:

- Capital University
- Wright State University
- University of Cincinnati
- Ohio State University

See the transfer section of the catalog and your academic advisor for more information.

Course #	Course Title	Credit Hours
<b>Fall</b>		
SWK 1100	Introduction to Social Work *	3
SWK 1105	Chemical Dependency I: Pharmacology and Physiology of Psychoactive Substances	3
ENG 1111	English I *	3
FYE 1101	College Success	1
MTH 1060	Business Mathematics ***	or
STT 2640	Elementary Statistics I ***	3
SOC 1110	Introduction to Sociology	3
<b>Spring</b>		
SWK 1122	Social Work Methods and Procedures	3
SWK 1136	Affective Education and Group Treatment	3
ENG 1112	English II	3
PSY 1111	Introduction to Psychology	3
- -	Humanities Elective	3
SWK 2205	Chemical Dependency II: Assessment, Diagnosis, and Treatment Strategies	3
<b>Fall</b>		
SWK 2218	Social Work and Mental Health	3
SWK 2230	Introduction to Social Welfare	3
SWK 2260	Multicultural Competence in a Diverse World	3
SWK 2271	Social Services Practicum I **	or
SWK 2272	Social Services Practicum II **	2
SWK 2291	Social Services Seminar I **	or
SWK 2292	Social Services Seminar II **	1
<b>Spring</b>		
SWK 2215	Chemical Dependency III: Co-Occurring Disorders of Addiction and Mental Health	3
SWK 2261	Introduction to Prevention	3
SWK 2272	Social Services Practicum II **	or

SWK 2271	Social Services Practicum I **	2
SWK 2292	Social Services Seminar II **	or
SWK 2291	Social Services Seminar I **	1
BIO 1410	Fundamentals of Biology	4
PSY 2223	Lifespan Human Growth and Development	3
- -	Humanities/Social Science Elective	3
	Total Credit Hours	65

\* ENG 1111 and SWK 1100 MUST be completed with a C or better before enrolling in additional social service (SWK) courses.

\*\* SWK 2271 Social Work Assistant Practicum I and SWK 2291 Social Work Assistant Seminar I must be taken together. SWK 2272 Social Work Assistant Practicum II and SWK 2292 Social Work Assistant Service Seminar II must be taken together. Students must attend Practicum orientation and have written approval from the field placement instructor in order to be admitted into a practicum course.

\*\*\* Any OT36 math course may satisfy this requirement. The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Many individuals, especially part-time students and those taking college preparatory requirements, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

A complete listing of humanities and social science electives can be found in the Clark State catalog.

## Social Work Transfer - Wright State University

The Social Work Transfer program provides curricular options to prepare a student to transfer into the Bachelor of Arts degree in Social Work at Wright State University. It serves as a semester-by-semester guideline for transfer. It is not designed to prepare students with the skills needed to obtain employment in the field of social work upon completion of this associate degree. Students who wish to obtain employment in the social work field upon completion of an associate degree should follow the Social Services Technology Associate of Applied Science degree that is offered at Clark State.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

- Demonstrate familiarity with social welfare policies and processes.
- Demonstrate a basic understanding of social work profession and practice.
- Display an appreciation and respect of diversity.

### Scholastic Preparation

Students entering this program should have taken the college preparatory courses offered by their high schools. Students who did not take this track may require college preparatory classes or additional coursework at Clark State.

### Graduation Requirements

Foreign language courses are not required for a Clark State AA degree. Foreign language courses are required for BA in social work from WSU. Students may take SPN 1111, 1112, and 2111 at Clark State toward this requirement. SPN 1111 and SPN 1112 are included in the curriculum plan. Foreign language proficiency may replace the foreign language courses; the student who has taken foreign language courses in high school should consult with advisors at Wright State University regarding this requirement.

### Transfer Options

Admission to Wright State's Social Work program is competitive. Admission requirements include a cumulative GPA of 2.25 or higher, a grade of C or higher in ENG 1111 and 1112, and completion of the official application to the Social Work program. Students should apply to WSU's Social Work program by 4 p.m. February 1, to be considered for admission. Meeting the minimum requirements does not guarantee admission. The Wright State University Social Work application is available on their Department of Social Work, Bachelor of Arts in Social Work website.



Course #	Course Title	Credit Hours
<b>Fall</b>		
BIO 1410	Fundamentals of Biology	4
ENG 1111	English I	3
FYE 1101	College Success	1
HST 1110	Western Civilization to 1600 (GA)	3
PSY 1111	Introduction to Psychology (GA)	3
SWK 1100	Introduction to Social Work	3
<b>Spring</b>		
BIO 1420	Global Biology * (GA)	4
ENG 1112	English II	3
MTH -	Elective**	3
SOC 1110	Introduction to Sociology (GA)	3
<b>Fall</b>		
COM 1110	Interpersonal Communication I (GA)	3
SPN 1111	Beginning Spanish, Course I	or
ASL 1111	Beginning American Sign Language, Course I	3
SWK 2230	Introduction to Social Welfare	3
SWK 2260	Multicultural Competence in a Diverse World	3
<b>Spring</b>		
ECO 1100	General Economics	3
ENG 2300	Great Books: World Literature (GA)	3
HST 1120	Western Civilization Since 1600 (GA)	3
PHL 2000	Critical Thinking	3
PLS 1100	Introduction to American Politics	3
SPN 1112	Beginning Spanish, Course II (GA)	or
ASL 1112	Beginning American Sign Language, Course II (GA)	3
	Total Credit Hours	60

\* Any Ohio Transfer 36 (TR36) approved laboratory science course may be substituted for BIO 1420.

\*\* Any Ohio Transfer 36 (TR36) approved mathematics course may be taken.

In recognition of the growing importance of global awareness, the College also requires that students receiving the Associate of Arts degree take at least four courses with significant international content. Courses in the curriculum plan that meet this requirement are identified with the "GA" designation behind the course name.

The program schedule is designed for full-time students who have completed all prerequisites and who have no college preparatory recommendations. Some individuals, especially part-time students and those taking college preparatory courses, will require additional semesters of study. Students should consult their academic advisors for help in planning their schedules.

## SOCIAL SCIENCES/HUMAN SERVICES AND PUBLIC SAFETY CERTIFICATES

### Basic Peace Officer Academy

The Clark State Basic Peace Officer Training Academy is designed to meet the requirements of the Ohio Police Officer Training Council (OPOTC) and is offered in cooperation with local law enforcement agencies, the State of Ohio, and OPOTC. Successful graduates of this program will be recommended to take the state certification examination. Successful graduates also have the opportunity to earn college credit towards a Clark State's Criminal Justice degree.

Basic Peace Officer Training topics include administration, legal, human relations, firearms, driving, traffic, investigation, patrol, traffic enforcement, civil disorders, defensive tactics, first aid, homeland security and physical conditioning. Additional certificates may be earned for pepper spray and taser.

Four academies are offered each year; two day and two night. Attendance at all classes is mandatory. Formal class meetings for these academies are held on the Clark State Campus or at a satellite location. Firearms and driver trainings are conducted at off-campus locations. Day academies begin in March and July with classes from 8 a.m. - 5 p.m., Monday through Friday. Evening academies begin January and May with classes from 5:30 p.m. - 10:30 p.m., Monday through Friday. All academies include multiple weekends with certain training events held off-site.

Additional Information and Enrollment Forms are available by calling 937-328-7960, or visiting the Police Academy Office at 100 South Limestone Street, Springfield, Ohio, Room 201A or Room 201B. If you are interested in attending the Basic Peace Officer Training Academy, please complete the online Student Enrollment Interest Form. This provides the college with a record of your interest, and you will be contacted with more information. Applicants must appear in person to enroll in the academy.

#### Equipment

The academy provides much of the needed equipment. During firearms training, the police academy will provide a firearm, ammunition, holster, duty belt, belt stays, ammo pouches, and gun belt for the student's use. A gun belt with training gear that includes, among other things, training Taser and pepper spray canister will be provided to wear during class.

#### Cost

The cost of the Basic Peace Officer Training Academy is approximately \$5575 for tuition and fees. Fees will include the required Ohio Criminal Code Handbook, some uniform apparel, and other items.

#### Financial Aid

If you need assistance paying for your education, complete a Free Application for Federal Student Aid (FAFSA) online. By filing the FAFSA, you will be considered for all aid for which you might be eligible.

The Police Academy is a short-term program and has different annual limits for federal grant and student loans. If you have questions about financial aid contact the Financial Aid office at 937-328-6034 or email [financialaid@clarkstate.edu](mailto:financialaid@clarkstate.edu). Clark State provides a Delayed Payment Plan through the Cashier's Office. The academy is approved for veterans. For more information about financial aid assistance for veterans, please call 937-328-6014.

### Learning Outcomes

Upon completion of the Basic Peace Officer Academy, graduates will be able to:

- Demonstrate technical proficiency in law enforcement skills necessary to fulfill the role of a police officer or sheriff deputy.
- Communicate effectively with other academy members, police officers, and other departments.
- Demonstrate efficiency in various skills required by OPOTC, National Highway Traffic Safety Administration, and the U.S. Department of Homeland Security.
- Exhibit required practical skills related to human behavior through training scenarios and practical applications.

### Scholastic Preparation

All basic Peace Officer Training Academy students must test and meet OPOTC physical fitness standards prior to the start of the academy, and in order to be eligible to take the state certification exam.

### Academic Requirements

Applicants should contact Clark State's Police Academy to obtain an application packet which will have detailed information about when and how to complete these requirements.

### Admission Requirement

Academy applicants must meet stringent entrance requirements as directed by the Attorney General of the State of Ohio before admitted to the program. Requirements that must be met are:

- High school diploma or its equivalent.
- Must be 21 years of age by completion of the academy.
- If no previous college experience, must take College placement tests in reading and. Students must test out of college preparatory reading and math or complete the appropriate college preparatory courses before enrolling in the academy.
- Valid driver's license.
- Submit Livescan fingerprints at the Clark County Sheriff's Office for the State of Ohio Bureau of Criminal Identification & Investigation (BCI &I) and the FBI to determine any criminal or traffic convictions that would disqualify a student from the academy.
- Complete and submit results of a drug screening.
- Obtain a physical and return a signed medical release from a physician.
- Complete physical fitness test and meet OPOTA's physical fitness standards.

### Uniform Requirements

Uniforms are required for all police academy students. The uniform shall consist of a police academy shirt (supplied by the academy), uniform pants, white t-shirt, black belt, black socks, and black shoes or boots. There are no exceptions to the uniform requirement.

### Mandatory Attendance

All hours of instruction in the police academy are mandatory. Any missed hours must be made up within 14 days at the cost of \$35.00 an hour for instructional fees.

### Graduation Requirements

Graduation is based on successful completion of OPOTA's requirements. Upon successful completion of the program students will be eligible to take the state certification exam. Successful completion of the exam allows students to obtain a position in law enforcement.

The law enforcement field is thriving. Advances in technology and an emphasis on homeland security have fueled a demand for a new breed of law enforcement professionals equipped to meet the changes in national security. Several rewarding law enforcement careers that are in demand in today's security-conscious society include FBI Agent, Homeland Security, Police Officer, Deputy Sheriff, Armed Security, Corrections Officers, Probation Officers, Court Officers, U.S. Marshal, Customs Agent, Secret Service Agent and Game Warden.

Course #	Course Title	Credit Hours
CRJ 1283	Basic Law Enforcement I	8
CRJ 1284	Basic Law Enforcement II	8
	Total Credit Hours	16

Must complete CRJ 1283 (Basic Law Enforcement I) before taking CRJ 1284 (Basic Law Enforcement II). Each course is 8 credit hours.

## Chemical Dependency Short-Term Technical Certificate

This certificate is a recommended addition to the resume of anyone working towards or already possessing an Associates, Bachelor's or Master's Degree in a Social Service-related field and working in service fields including health care, mental health, criminal justice, correction, and social services. It recognizes that an individual's scope of knowledge and practice includes specific understanding of the pharmacology, physiology, and treatment processes for substance use disorder concerns seen daily in these fields. For those interested in working in the field of substance use disorder treatment, this certificate is focused on providing clock hours in the clinical Domains of Competency required by the Ohio Chemical Dependency Professionals Board under the Ohio Department of Mental Health and Addiction Services (OMHAS) that meets the eligibility standards to apply for the Chemical Dependency Counselor Assistant (CDCA) Phase I and II state certifications as well as the full 180 educational clock hours required towards the Licensed Chemical Dependency Counselor II and III licenses provided the student has completed at least 2000 field hours and a completed degree.

Course #	Course Title	Credit Hours
SWK 1105	Chemical Dependency I: Pharmacology and Physiology of Psychoactive Substances	3
SWK 2205	Chemical Dependency II: Assessment, Diagnosis, and Treatment Strategies	3
SWK 2215	Chemical Dependency III: Co-Occurring Disorders of Addiction and Mental Health	3
SWK 2225	Chemical Dependency IV: Service Coordination	3
	Total Credit Hours	12

## EMT Short-term Technical Certification

The Emergency Medical Technician (EMT) course is a seven credit-hour very fast paced and labor intensive course that includes 150-180 hours of classroom, lab, and clinical/field education that can be completed in one semester. Upon successful completion of this course the student is eligible to take the National Registry and State Certification Examination at the basic level. Those who complete the course are prepared to work in an entry-level position in ambulance services and in fire divisions statewide. This course is the foundation course that serves as a stepping stone to full paramedic certification.

### Learning Outcomes

Upon completion of the Emergency Medical Technician certificate, the graduate will be able to:

- Recognize the nature and seriousness of the patient's condition or extent of injuries to assess requirements for emergency medical care.
- Administer appropriate emergency medical care based on assessment findings of the patient's condition.
- Lift, move, position and otherwise handle the patient to minimize discomfort and prevent further injury.
- Perform safely and effectively the expectations of the job description.

Students entering EMS 1100 must:

- Pass ACCUPLACER Reading placement tests with scores testing out of college preparatory reading and writing or pass with a C or better in an English developmental course ENG 0980.
- Test out of college preparatory reading and writing or pass with a C or better ENG 0850 for reading and ENG 090
- Pass Quantitative Reasoning test with a score of 246 or better, or pass with a grade of C or better with a score of 246 or better, or pass with a grade of C or better MTH 0500.

### Graduation Requirements

- Basic Life Support (BLS) certification for professional CPR is embedded in the EMS 1100 curriculum. Students will receive their BLS ecard after passing this portion of the class.
- Complete health requirements prior to attending clinical.
- Complete criminal background check requirement prior to attending clinical.
- Complete drug screen requirement prior to attending clinical if required by assigned clinical agency.
- Students must be 17 years of age to take the state examination.

Individuals seeking a career in emergency medical services should realize that to be successful, they must be emotionally stable, flexible and physically fit enough to perform the minimum entry-level job requirements.

Course #	Course Title	Credit Hours
EMS 1100	EMT Theory & Practice *	7
	Total Credit Hours	7

\*Offered fall, spring and summer terms

## Firefighter / Transition Departmental Certificate

This course is available as a direct delivery outreach offering as requested.

This 120 hour course builds on the awareness level of the 36-hour Volunteer Firefighter course.

### Objectives

- CEVO - Certified Emergency Vehicle Operator certification with documented 8 hours of hands-on driving skills
- Hazardous Materials Operations level certificate
- Interior live fire training
- Vehicle extrication training
- Advanced PPE/SCBA training
- Ventilation and tools
- Rope use and care
- Salvage and overhaul
- Ground ladders
- 16 Life Safety Initiatives

### Learning Outcomes

This course transitions the basic 36 hour Volunteer Firefighter to a NFPA 1001 Level 1 Firefighter. The course prepares the firefighter to:

- Operate inside burning structures.
- Safely place and climb ground ladders
- Determine need and apply sound ventilation practices.
- Gain skills in incident command and basic first aid.

### Prerequisites

Students must already have their 36-hour Volunteer Firefighter certification, NIMS 100 and 700, and have a valid driver's license.

### Graduation Requirements

To successfully complete the Firefighter/Transition Departmental Certificate students must achieve 78% overall course average, successfully pass the Ohio Department of Public Safety exam with a minimum of 70%, and pass all Pro Board Accredited skill stations.

Course #	Course Title	Credit Hours
FFC 1020	Firefighter I Transition	5
	Total Credit Hours	5

## Firefighter / Volunteer Departmental Certificate

This program is available as a direct delivery outreach offering as requested.

This 36-hour course, classified as (Awareness level) firefighting, covers the basics of entry level firefighting for volunteers. The course consists of classroom and hands on practical experiences.

### Learning Objectives

- Fire department organization and safety
- Basic ground ladder use
- Basic hose evolutions
- Basic tools and equipment
- SCBA and personal protective equipment (PPE)
- Basic fire control and ventilation techniques
- Basic fire behavior
- Portable fire extinguishers

Firefighter course objectives are available on the Ohio Department of Public Safety website.

### Learning Outcomes

The student will gain the basic foundational knowledge to:

- Assist fire departments with exterior operations.
- Acquire through department continuing education, the complex techniques required for interior operations and direct fire attack.

### Prerequisites

Students must test out of preparatory reading via college placement exam or testing out of college preparatory reading and writing or pass with a C or better ENG 0850 for reading and ENG 0900 for writing as well as complete NIMS 100 and 700.

### Graduation Requirements

To successfully complete the Firefighter/Volunteer Department Certificate students must achieve 75% overall course average, successfully pass the Ohio Department of Public Safety exam with minimum 70%, and pass all Pro Board Accredited skill stations.

Course #	Course Title	Credit Hours
FFC 1010	Volunteer Firefighter	1
	Total Credit Hours	1

## Firefighter I Short-Term Technical Certification

This course is available as a direct delivery outreach offering as requested.

This 156-hour program is designed to meet the NFPA 1001 Standard for Firefighter Professional Qualifications. The program provides the foundation for Firefighters to operate on the fire ground and initiate fire attack inside a structure. The Level I completes the basic training required to enter the Firefighter Level II program required to be a career Firefighter.

### Objectives

- Fire Department Organization and Safety
- Life Safety Initiatives
- Fire Behavior
- Building Construction
- Basic Rescue
- Ventilation and Tools
- Salvage and Overhaul
- Ground Ladders
- Certified Emergency Vehicle Operations
- Hazardous Materials Operations Level Certificate
- Incident Command System
- Basic First Aid and CPR Skills
- CEVO - Certified Emergency Vehicle Operator Certification with documented 8 hours of hands on driving skills

An in-depth list of the Firefighter I course objectives are available on the Ohio Department of Public Safety website.

### Prerequisites

Students must test out of preparatory reading via the college placement exam or pass with a C or better ENG 0850 for reading, ENG 0900 for writing, complete NIMS 100 and 700, and have a valid drivers license.

### Graduation Requirements

To successfully complete the Firefighter I Short-Term Technical Certificate students must achieve 78% overall course average, pass the State of Ohio Public Safety Level I test with at least 70%, and pass all Pro Board accredited skill stations.

Course #	Course Title	Credit Hours
FFC 1070	Firefighter I (new curriculum item)	7
	Total Credit Hours	7

## Firefighter II Short-Term Technical Certification

This course is available as a direct delivery outreach offering as requested.

This 104-hour Level II course transitions the Level I Firefighter to the minimum requirement under NFPA 1001 Standard for Fire Fighter Professional Qualifications to be a career Firefighter. The Level II course completes the advanced tactics of ventilation, fire control, an in-depth understanding of fire prevention, and public education as well as rope rescue and auto machinery extrication.

### Objectives

- Fire alarms and communications
- Firehose appliances and streams
- Foam fire systems
- Rescue
- Fire detection alarm and suppression systems
- Fire cause and education
- Extensive live fire operations

An in-depth list of the Firefighter II course objectives are available on the Ohio Department of Public Safety website.

Most achieve 78% overall course average, pass the Ohio Department of Public Safety final exam with 70%, and pass all Pro Board Accredited skill stations.

### Prerequisites

State of Ohio Level I Firefighter certification, NIMS 100 and 700, Hazardous Materials Responder Operations Level certification, and certified emergency vehicle operators (CEVO) certification.

### Graduation Requirements

To successfully complete the Firefighter I Short-Term Technical Certificate students must achieve 78% overall course average, pass the State of Ohio Public Safety Level I test with at least 70%, and pass all Pro Board accredited skill stations.

Course #	Course Title	Credit Hours
FFC 2020	Firefighter II (new curriculum item)	4
	Total Credit Hours	4



## Paramedic Certification

The Paramedic Certification Program provides quality education in the art and science of advanced out-of-hospital emergency care. This curriculum provides for integration of knowledge and skills including pre-hospital environment, preparatory skills, trauma and burns, medical emergencies, OB/GYN emergencies, behavioral emergencies and crisis intervention. The program prepares competent entry-level paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

Individuals seeking a career in emergency medical services should realize that to be successful, they must be emotionally stable, flexible and physically fit enough to perform the minimum entry level job requirement. Students will find that at least a year's experience as an EMT will be beneficial as they challenge this advanced course.

### Program Outcomes

CAAHEP Accredited Paramedic Programs and CoAEMSP Letter of Review (LoR) Programs track and report outcome measured annually to the Committee on Accreditation for the Emergency Medical Services Professions (CoAEMSP). The most current CoAEMSP Annual Report was for the calendar year 2022. The most recent success rate for the National Registry of EMT Paramedic/State Cognitive exam was 87%. The most recent positive placement rate for graduates was 93%. Positive placement is defined by the CoAEMSP as "Employed full or part-time in a related field and/or continuing his/her education and/or serving in the military". Positive placement is measured at completion of the program. The most recent retention rate was 75%.

### Learning Outcomes

- Communicate (written, verbal) effectively with patients, families, healthcare providers, and other supportive agencies.
- Demonstrate ability to integrate patho-physiologic and psycho-social principles and assessment findings to formulate a field impression and implement a treatment plan for the out-of-hospital patient.
- Demonstrate technical proficiency in skills necessary to fulfill the role of entry-level paramedic.
- Exhibit ethical behaviors consistent with professional standards and employer expectations.
- To prepare competent entry level paramedics in the cognitive (knowledge), domains with or without exit points at the Advanced Emergency Medical Technician and/or Emergency Medical Technician, and/or Emergency Medical Responder levels.

### Prior Learning Assessment

Students who have prior education or training equivalent to the paramedic course of study may demonstrate knowledge acquisition and practical skill competency in a series of steps that may absolve the student from attendance at the formalized paramedic sequence of classes. Contact the EMS Program Coordinator for more information on this Prior Learning Assessment policy.

### Technical Standards

All students accepted into the Emergency Medical Services programs must be able to meet the General Knowledge and Skills Requirements of EMS Personnel with or without reasonable accommodations. These requirements are linked to this program page on the College's website and are also provided to students via the EMS Policy Manual. Students are required to sign a form indicating they have reviewed these requirements and submit that form to the EMS Program Coordinator when they enter the program.

### Prerequisites

Prior to entering EMS 1131, the student must meet the following entrance requirements:

- Pass ACCUPLACER Reading and Writing placement tests with scores testing out of college preparatory reading and writing or pass with a C or better ENG 0850 for reading and ENG 0900 for writing.
- Pass a Quantitative Reasoning test with a score of 250 or better or pass MTH 0500 with a grade of C or better.
- Complete BIO 1105 with a C or better.
- Complete MST 1105 with a D or better.
- Have Ohio EMT certification.
- Have current CPR provider card.
- Complete physical exam and health requirements prior to attending clinical.
- Complete criminal background check requirements prior to attending clinical.
- Complete drug screen prior to attending clinical if required by the clinical agency.

Course #	Course Title	Credit Hours
<b>Fall</b>		
EMS 1112	Paramedic Hospital Practice I	1
EMS 1122	Paramedic Field Practice I	1
EMS 1131	Paramedic Theory I	6
EMS 1141	Paramedic Practical Skills Lab I	1.6
<b>Spring</b>		
EMS 1114	Paramedic Hospital Practice II	1
EMS 1124	Paramedic Field Practice II	1
EMS 1133	Paramedic Theory II	6
EMS 1143	Paramedic Practical Skills Lab II	1.7
<b>Summer</b>		
EMS 1116	Paramedic Hospital Practice III	1
EMS 1126	Paramedic Field Practice III	1
EMS 1134	Paramedic Theory III (new curriculum item)	3
- -	(new curriculum item)	1.7
<b>Fall</b>		
EMS 1128	Paramedic Field Practice IV	1
EMS 1136	Paramedic Theory IV (new curriculum item)	3
Total Credit Hours		28.3

# Peer Support/Addiction & Recovery Short-Term Technical Certificate

Upon successful completion of the SWK 1110 Peer Support Fundamentals I course, students will receive Peer Recovery Support certification from the State of Ohio's Department of Mental Health and Addictions Services Board. This certification is being sought after many employers to help their recovering individuals maintain stability.

Students who themselves are in recovery with addiction and/or mental health issues have the option of starting their educational journey and employment as Peer Recovery Supporters (See the Peer Recovery Support Short-Term Technical Certificate). Peer Recovery Supporters have the opportunity to earn clinical credentials by completing the Peer Support/Addiction and Recovery Short-Term Technical Certificate. This certificate provides a bridge, enabling a Peer Recovery Supporter to obtain the Chemical Dependency Counselor Assistant (CDCA) State of Ohio certification.

This certificate enables a Peer Recovery Supporter to move into the clinical treatment program of study in the Addiction and Recovery Services degree. It may also be blended into the Social Work Technology degree.

Course #	Course Title	Credit Hours
Fall		
SWK 1110	Peer Support Fundamentals I	4
FYE 1101	College Success	1
SWK 1105	Chemical Dependency I: Pharmacology and Physiology of Psychoactive Substances	3
ENG 1111	English I	3
ITS 1105	Computer Concepts and Software Applications	3
Spring		
PSY 1111	Introduction to Psychology	3
SWK 2205	Chemical Dependency II: Assessment, Diagnosis, and Treatment Strategies	3
SWK 1136	Affective Education and Group Treatment	3
SWK 2260	Multicultural Competence in a Diverse World	3
	Total Credit Hours	26

# TRANSFER

## Associate of Arts General Transfer

The Associate of Arts General Transfer degree provides the foundational knowledge and skills in general education that are often required to pursue a bachelor's degree. Courses in this program focus on the areas of English, communication, literature, arts, humanities, social sciences, mathematics, and natural sciences. As a part of the degree, students will also choose electives based on interest and any requirements of the transfer institution. Any elective hours should be planned carefully with an advisor to ensure transferability.

Focused pathways within the Associate of Arts are currently available in communication, English, geography, history, political science, psychology, social services, sociology, and theatre to help focus the elective courses within this general transfer program. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts program, particularly at state institutions in Ohio.

### Global Awareness

In recognition of the growing importance of global awareness, the Associate of Arts degree requires students to take at least four courses with significant international content. Courses meeting this requirement are identified in the College catalog and are fulfilled as a part of the requirements within the concentration or elective area.

### Advanced Courses

All students pursuing the Associate of Arts degree are required to complete at least nine credit hours in courses numbered 2000 or higher. These classes are taken as a part of the requirements within the concentration or elective area.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts General Transfer degree, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Clark State has detailed transfer agreements with many local colleges and universities. The greatest number of these are with Wright State University and are in areas such as Business, English, Math, Pre-Teacher Education,

and Psychology. Check the transfer guide section of the Clark State website for more information about these transfer agreements.

Transfer institutions make the determination in acceptance of credit. The student should consult with an academic advisor and the intended transfer institution when planning a schedule of classes. With careful scheduling and advising, a student should be able to transfer with junior standing, especially within the state of Ohio.

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
- -	OT 36 Math Elective *	3
- -	OT 36 Social and Behavioral Sciences Elective **	3
- -	OT 36 Literature, Arts and Humanities Elective ***	3
<b>Spring</b>		
ENG 1112	English II	3
- -	OT 36 Literature, Arts and Humanities Elective ***	3
- -	Communication, Arts and Humanities Elective ^	3
- -	Elective (2000 level) ~	3
- -	Elective (GA) ~	3
<b>Fall</b>		
- -	OT 36 Natural Sciences Elective ^^	4
- -	OT 36 Social and Behavioral Sciences Elective **	3
- -	OT 36 Elective ^^^	3
- -	OT 36 Elective ^^^	4
- -	Elective (2000 level) ~	3
<b>Spring</b>		
- -	OT 36 Natural Sciences Elective ^^	4
- -	Communication, Arts and Humanities Elective ^	3
- -	Elective (2000 level) ~	3
- -	Elective (GA) ~	3
- -	Elective ~	2
	Total Credit Hours	60

\*Ohio Transfer 36 Math Electives: MTH 1070, 1280, 1340, 2100, 2200, 2220, 2242, 2430, STT 2640

\*\*Ohio Transfer 36 Social and Behavioral Sciences Electives from at least two different areas: ECO, GEO 1100, 2200, PLS, PSY 1111, 2223, 2230, SOC

\*\*\*Ohio Transfer 36 Literature, Arts and Humanities Electives from at least two different areas: ART 1001, 1002, 1300, ENG 1600, 2300, 2510, 2520, 2610, 2620, HST, MUS 1130, PHL, THE 1130, 1133, 2241, 2242

^Communication, Arts, and Humanities Electives: ART, COM, ENG 1600, 2300, 2510, 2520, 2610, 2620, HST, HUM, MUS, PHL, THE

~General electives include most college level courses in the academic catalog. At least nine credit hours of 2000

level courses are required. Consult an advisor for course selection based on the transfer institution.

^^Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

^^^Ohio Transfer 36 Elective: Arts, Communication, Humanities, Math, Social and Behavioral Sciences, Natural Sciences options. Consult an advisor for course selection based on the transfer institution.

GA: This degree requires at least two courses with significant international content designated as Global Awareness courses.

## Associate of Arts General Transfer - Communication Pathway

The Communication Pathway of the Associate of Arts emphasizes transfer preparation to pursue a bachelor's degree in communication. But many doors will open with this two-year degree, including customer service, sales, and management positions.

With a degree in Communication, students can pursue multiple areas of interest:

- Find inspiration by working with others to advocate for passion projects.
- Manage conflict in an organization.
- Get messages out to the community with public relations.
- Persuade others to think differently through activism.
- Become a radio DJ, a news anchor or a journalist.
- Market or sell products.
- Counsel people in their time of need.
- Take ideas to the big screen through film making.

An Associate of Arts degree in Communication provides the foundational knowledge and skills in general education that are often required to pursue a Bachelor's degree. Courses in this pathway focus on communication including public speaking, interpersonal communication, small group communication and mass communication. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in Communication, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Scholastic Preparation

Students entering this program should have taken the college preparatory courses offered by their high schools. Students who do not test into MTH 1070 Quantitative Reasoning will need to take the necessary prerequisite mathematics courses before beginning the required math course. Talk to your Communication advisor at Clark State for specific information regarding this degree program.

## Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
COM 1150	Introduction to Communication Theory	3
- -	OT 36 Math Elective*	3
- -	OT 36 Natural Sciences Elective**	4
<b>Spring</b>		
ENG 1112	English II	3
COM 1120	Public Speaking I	3
- -	OT 36 Arts Elective***	3
- -	OT 36 Social and Behavioral Sciences Elective ^	3
- -	OT 36 Natural Sciences Elective**	4
<b>Fall</b>		
COM 1110	Interpersonal Communication I	3
COM 1170	Small Group Communication	3
- -	OT 36 Social and Behavioral Sciences Elective ^	3
- -	OT 36 Literature Elective (2000 level)^	3
- -	Language or Elective^^	3
<b>Spring</b>		
COM 1130	Introduction to Mass Communication	or
COM 2240	Organizational Communication	or
COM 2700	Communication Internship	3
- -	OT 36 Arts and Humanities Elective+	3
- -	OT 36 Arts and Humanities Elective (2000 level)+	3
- -	Language or Elective^^	3
- -	Elective (2000 level) ^^	3
Total Credit Hours		60

\* Ohio Transfer 36 Math Electives: MTH 1070, 1280, 1340, 2100, 2200, 2220, 2242, 2430, STT 2640

\*\* Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

\*\*\* Ohio Transfer 36 Arts Elective: ART 1001, 1002, 1300, MUS 1130, THE 1130, 1133, 2241, 2242

^ Ohio Transfer 36 Social and Behavioral Sciences Electives from at least two different areas: ECO, GEO 1100, 2200, PLS, PSY 1111, 2223, 2230, SOC

^^ Ohio Transfer 36 Literature Electives: ENG 2300, 2510, 2520, 2610, 2620

^^^ Language electives: ASL, FRN, SPN. General electives include most college level courses in the academic catalog. Consult and advisor for course selection.

+ Ohio Transfer 36 Arts and Humanities Electives from at least two different areas: ART, ENG, HST, MUS, PHL or THE

## Associate of Arts General Transfer - English Pathway

The English Pathway of the Associate of Arts General Transfer degree emphasizes transfer preparation for pursuing a bachelor's degree in English. The skill sets acquired through a degree focused in English are applicable to many careers where students can:

- Write marketing materials or design technical manuals
- Teach literature and composition
- Create original screenplays, poems, stories, or novels
- Study law
- Become a journalist
- Edit books, blogs, or magazines

An Associate of Arts degree provides the foundational knowledge and skills in general education that are often required to pursue a Bachelor's degree. Courses in this pathway focus on the humanities including writing, literature, and arts. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in English, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult with their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
PSY 1111	Introduction to Psychology	3



ENG 1600	Introduction to Literature	3
SPN 1111	Beginning Spanish, Course I	or
ASL 1111	Beginning American Sign Language, Course I	3
- -	OT 36 Math Elective *	3

### Spring

ENG 1112	English II	3
COM 1120	Public Speaking I	3
ENG 2300	Great Books: World Literature	3
SPN 1112	Beginning Spanish, Course II	or
ASL 1112	Beginning American Sign Language, Course II	3
- -	OT 36 Natural Sciences Biology Elective **	4

### Fall

ENG 2610	British Literature to 1800	or
ENG 2520	American Literature II	3
SPN 2111	Intermediate Spanish, Course I	or
ASL 2111	Intermediate American Sign Language, Course I	3
- -	OT 36 Social and Behavioral Sciences Elective (outside PSY) ^	3
- -	OT 36 Arts Elective ^^	3
- -	Elective ++	3

### Spring

ENG 2510	American Literature I	or
ENG 2620	British Literature from 1800 to the Present	3
PHL 2000	Critical Thinking	3
- -	American or British Literature Elective ^^^	3
- -	OT 36 Natural Sciences Elective +	4
	Total Credit Hours	60

\*Ohio Transfer 36 Math Electives: MTH 1070 (recommended), 1280, 1340, 2100, 2200, 2220, 2242, 2430, STT 2640

\*\*Ohio Transfer 36 Natural Sciences Biology Elective: BIO 1410, 1420, 1510, 1520, 2121, 2122

^Ohio Transfer 36 Social and Behavioral Sciences Electives: ECO, GEO 1100, 2200, PLS, SOC

^^Ohio Transfer 36 Arts Elective: ART 1001, 1002, 1300, MUS 1130, THE 1130, 1133, 2241, 2242

^^^American or British Literature Elective: ENG 2510, 2520, 2610, 2620

+Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

++General electives include most college level courses in the academic catalog. (Recommend ENG 2230 or ENG 2250.) Consult an advisor for course selection based on the transfer institution.

## Associate of Arts General Transfer - Geography Pathway

The Geography Pathway of the Associate of Arts General Transfer degree emphasizes transfer preparation for a student to pursue a bachelor's degree in Geography. The skills and knowledge acquired through a degree focused on Geography are applicable to many careers, including those where you can:

- Work in Urban or Community Planning
- Provide environmental analysis
- Specialize in Geographic Information Systems (GIS)
- Focus on economic development
- Provide cultural analyses
- Work in international business
- Specialize in mapping and cartography

An Associate of Arts degree provides the foundational knowledge and skills in general education that are often required to pursue a Bachelor's degree. Courses in this pathway focus on the social sciences. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in Geography, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
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Fall

FYE 1101	College Success	1
ENG 1111	English I	3
GEO 1000	Introduction to Cartography with GIS	3
- -	OT 36 Math Elective *	3
- -	OT 36 Social and Behavioral Sciences Elective (outside GEO) **	3

Spring

ENG 1112	English II	3
GEO 2200	World Regional Geography	3
GST 1400	Mapping and Georeferencing with GIS	3
- -	OT 36 Humanities Elective ***	3
- -	OT 36 Elective ^	3

Fall

GEO 1100	Human Geography	3
SPN 1111	Beginning Spanish, Course I	or
ASL 1111	Beginning American Sign Language, Course I	3
- -	OT 36 Natural Sciences Elective ^^	4
- -	OT 36 Arts Elective ^^	3
- -	OT 36 Elective ^	3

Spring

GEO 1400	Introduction to Physical Geography	3
SPN 1112	Beginning Spanish, Course II	or
ASL 1112	Beginning American Sign Language, Course II	3
- -	OT 36 Natural Sciences Elective ^^	4
- -	Elective (2000 level) +	3
- -	Elective (2000 level) +	3
	Total Credit Hours	60

\* Ohio Transfer 36 Math Electives: MTH 1070, 1280, 1340, 2100, 2200, 2220, 2242, 2430, STT 2640 (recommended)

\*\* Ohio Transfer 36 Social and Behavioral Sciences Electives outside GEO: ECO, PLS, PSY 1111, 2223, 2230, SOC

\*\*\* Ohio Transfer 36 Humanities Elective: ENG 1600, 2300, 2510, 2520, 2610, 2620, HST 1110, 1120, 1210, 1220, 1410, 1420, PHL 2000, 2100, 2300, 2400

^ Ohio Transfer 36 Elective: Arts, Communication, Humanities, Math, Social and Behavioral Sciences, Natural Sciences option. Consult an advisor for course selection based on the transfer institution.

^^ Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

^^^ Ohio Transfer 36 Arts Elective: ART 1001, 1002, 1300, MUS 1130, THE 1130, 1133, 2241, 2242

+ General electives include most college level courses in the academic catalog. At least nine credit hours of 2000 level courses are required for this degree. Consult an advisor for course selection based on the transfer institution.

## Associate of Arts General Transfer - History Pathway

The History Pathway of the Associate of Arts General Transfer degree emphasizes transfer preparation for pursuing a bachelor's degree in History. The skill sets acquired through a degree focused in History are applicable to many careers where students can:

- Conduct historical research for museums or private corporations
- Work as an archivist
- Participate in the historic preservation of public and residential buildings
- Oversee federal, state, or local historical projects
- Narrate history for living history museums
- Pursue graduate studies in law or education

An Associate of Arts degree provides the foundational knowledge and skills in general education that are often required to pursue a Bachelor's degree. Courses in this pathway focus on the humanities including writing, literature, and arts. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in History, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
HST 1210	American History to 1865	3
- -	OT 36 Math Elective *	3
- -	OT 36 Social and Behavioral Sciences Elective (outside SOC) **	3
- -	OT 36 Arts and Humanities Elective ***	3
<b>Spring</b>		
ENG 1112	English II	3
COM 1120	Public Speaking I	3
HST 1220	American History Since 1865	3
SOC 2220	Comparing Cultures	3
- -	Elective ^	3
<b>Fall</b>		
PHL 2000	Critical Thinking	3
HST 1110	Western Civilization to 1600	3
SPN 1111	Beginning Spanish, Course I	or
ASL 1111	Beginning American Sign Language, Course I	3
- -	OT 36 Natural Sciences Elective ^^	4
- -	Elective (2000 level) ^	3
<b>Spring</b>		
HST 1120	Western Civilization Since 1600	3
HST 1410	African American History to 1877	or
HST 1420	African American History Since 1877	3
SPN 1112	Beginning Spanish, Course II	or
ASL 1112	Beginning American Sign Language, Course II	3
- -	OT 36 Natural Sciences Elective ^^	4
	Total Credit Hours	60

\* Ohio Transfer 36 Math Electives: MTH 1070 (recommended), 1280, 1340, 2100, 2200, 2220, 2242, 2430, STT 2640

\*\* Ohio Transfer 36 Social and Behavioral Sciences Electives outside SOC: ECO, GEO 1100, 2200, PLS, PSY 1111 (recommended), 2223, 2230

\*\*\* Ohio Transfer 36 Arts and Humanities Elective: ART 1300, HUM 1110, MUS 1130, THE 1130

^ General electives include most college level courses in the academic catalog. At least nine credit hours of 2000 level courses are required for this degree. Consult an advisor for course selection based on the transfer institution.

^^ Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

## Associate of Arts General Transfer - Political Science Pathway

The Political Science Pathway of the Associate of Arts General Transfer degree emphasizes transfer preparation to pursue a bachelor's degree in Political Science. The skills and knowledge acquired through a degree focused on Political Science are applicable to many careers, including those where you can:

- Work in public administration
- Practice law
- Provide policy analysis
- Advocate for changes in public policies
- Report on the news as a journalist
- Provide commentary on issues of public interest
- Work in business and finance

An Associate of Arts degree provides the foundational knowledge and skills in general education that are often required to pursue a Bachelor's degree. Courses in this pathway focus on the social sciences. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in Political Science, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
PLS 1100	Introduction to American Politics	3
- -	OT 36 Arts Elective *	3
- -	OT 36 Math Elective **	3
<b>Spring</b>		
ENG 1112	English II	3
PLS 1300	Introduction to Comparative Politics	3
- -	OT 36 Natural Sciences Elective ^	4
- -	OT 36 Social and Behavioral Sciences Elective (outside PLS) ^^	3
- -	Elective ^^^	3
<b>Fall</b>		
PLS 2400	State and Local Politics	3
SPN 1111	Beginning Spanish, Course I	or
ASL 1111	Beginning American Sign Language, Course I	3
- -	OT 36 Natural Sciences Elective ^	4
- -	Elective (2000 level) ^^	3
- -	Elective ^^^	3
<b>Spring</b>		
PLS 2300	Introduction to International Relations	3
SPN 1112	Beginning Spanish, Course II	or
ASL 1112	Beginning American Sign Language, Course II	3
- -	OT 36 Humanities Elective +	3
- -	Elective ^^^	3
- -	Elective ^^^	3
	Total Credit Hours	60

\* Ohio Transfer 36 Arts Elective: ART 1001, 1002, 1300, MUS 1130, THE 1130, 1133, 2241, 2242

\*\* Ohio Transfer 36 Math Electives: MTH 1070, 1280, 1340, 2100, 2200, 2220, 2242, 2430, STT 2640 (recommended)

^ Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

^^ Ohio Transfer 36 Social and Behavioral Sciences Elective (outside PLS): recommend ECO, other options include GEO 1100, 2200, PSY 1111, 2223, 2230, SOC

^^^ General electives include most college level courses in the academic catalog. At least nine credit hours of 2000 level courses are required for this degree. Consult an advisor for course selection based on the transfer institution.

+ Ohio Transfer 36 Humanities Elective: HST or PHL recommended, other options include ENG 1600, 2510, 2520, 2610, 2620.

## Associate of Arts General Transfer - Psychology Pathway

The Psychology Pathway of the Associate of Arts General Transfer degree emphasizes transfer preparation for students to pursue a bachelor's degree in Psychology. The skill sets acquired through a degree focused in Psychology include:

- Judgment and decision-making
- Analytical thinking
- Critical thinking
- Information management
- Oral communication
- Written communication
- Adaptability
- Collaboration
- Inclusivity
- Creativity

Many of these skills overlap with those identified by the [American Psychological Association](#).

An Associate of Arts degree provides the foundational knowledge and skills in general education that is often required to pursue a Bachelor's degree. Courses in this pathway focus on the study of mental functions and behaviors. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in Psychology, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
PSY 1111	Introduction to Psychology	3
STT 2640	Elementary Statistics I	3
- -	OT 36 Natural Sciences Elective *	4
<b>Spring</b>		
ENG 1112	English II	3
PSY 2223	Lifespan Human Growth and Development	3
- -	OT 36 Humanities Elective **	3
- -	OT 36 Natural Sciences Elective *	4
- -	OT 36 Elective ***	3
<b>Fall</b>		
PSY 2240	Psychology of Personality	3
- -	OT 36 Arts Elective ^	3
- -	OT 36 Social and Behavioral Sciences Elective (outside PSY) ^^	3
- -	Elective ^^^	3
- -	Elective ^^^	3
<b>Spring</b>		
PSY 2230	Abnormal Psychology	3
PSY 2218	Introduction to Educational Psychology	3
PSY 2250	Introduction to Social Psychology	3
- -	Elective ^^^	3
- -	Elective ^^^	3
	Total Credit Hours	60

\*Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

\*\*Ohio Transfer 36 Humanities Elective: ENG 1600, 2300, 2510, 2520, 2610, 2620, HST, PHL

\*\*\*Ohio Transfer 36 Elective: Arts, Communication, Humanities, Math, Social and Behavioral Sciences, Natural Sciences options. Consult an advisor for course selection based on the transfer institution.

^Ohio Transfer 36 Arts Elective: ART 1001, 1002, 1300, MUS 1130, THE 1130, 1133, 2241, 2242

^^Ohio Transfer 36 Social and Behavioral Sciences Electives outside PSY: ECO, GEO 1100, 2200, PLS, SOC

^^^General electives include most college level courses in the academic catalog. Consult an advisor for course selection based on the transfer institution.

## Associate of Arts General Transfer - Sociology Pathway

The Sociology Pathway of the Associate of Arts emphasizes transfer preparation for pursuing a bachelor's degree in sociology. But many doors will open with this two-year degree, including family advocacy, sales, and nonprofit positions.

The skill sets acquired through a degree focused in Sociology are applicable to many careers for students to:

- Engage in community advocacy and development
- Provide case management for individuals and families through social services agencies
- Work with youth or the elderly
- Provide family planning services or work within the healthcare and insurance sectors
- Pursue work in the legal system including probation or parole
- Work in higher education as an advisor or in admissions

An Associate of Arts degree provides the foundational knowledge and skills in general education that are often required to pursue a Bachelor's degree. Courses in this pathway focus on culture and human behavior in society. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in Sociology, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).



Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
SOC 1110	Introduction to Sociology	3
ASL 1111	Beginning American Sign Language, Course I	or 3
SPN 1111	Beginning Spanish, Course I	3
STT 2640	Elementary Statistics I	3
<b>Spring</b>		
ENG 1112	English II	3
SOC 2230	Social Problems	3
ASL 1112	Beginning American Sign Language, Course II	or 3
SPN 1112	Beginning Spanish, Course II	3
- -	OT 36 Humanities Elective *	3
- -	Elective **	3
<b>Fall</b>		
SOC 2240	Racial and Cultural Minorities	3
- -	OT 36 Social and Behavioral Sciences Elective (outside SOC) ***	3
- -	OT 36 Natural Sciences Elective ^	4
- -	Elective **	3
- -	Elective **	3
<b>Spring</b>		
SOC 2270	Marriage and Family	3
- -	OT 36 Natural Sciences Elective ^	4
- -	OT 36 Arts Elective ^^	3
- -	Elective **	3
- -	Elective **	3
	Total Credit Hours	60

\*Ohio Transfer 36 Humanities Elective: ENG 1600, 2300, 2510, 2520, 2610, 2620, HST, PHL 2000 (recommended), 2100, 2300, 2400

\*\*SOC 2220 recommended. General electives include most college level courses in the academic catalog. Consult an advisor for course selection based on the transfer institution.

\*\*\*Ohio Transfer 36 Social and Behavioral Sciences Electives outside SOC: PLS 1100 recommended, other options include ECO, GEO 1100, 2200, PLS 1300, 2300, 2400, PSY 1111, 2223, 2230

^Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

^^Ohio Transfer 36 Arts Elective: ART 1001, 1002, 1300, MUS 1130, THE 1130, 1133, 2241, 2242

## Associate of Arts General Transfer - Theatre Pathway

The Theatre Pathway of the Associate of Arts General Transfer degree emphasizes transfer preparation for a student to pursue a Bachelor of Arts in theatre at a four-year university. Majors focus on general education and courses include acting, stagecraft, and script analysis. Within the program, students receive experiential training in Theatre by working on the program's live productions in the Clark State Performing Arts Center Turner Studio Theatre and Kuss Auditorium. Majors take one practicum course each term as part of their coursework and audition for program productions to gain experience in the field.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Arts degree in Theatre, a graduate will be able to:

- Demonstrate an understanding of the roles of all theatre personnel and use correct terminology.
- Demonstrate auditioning and performance skills and professionalism.
- Demonstrate theatre technology equipment skills including analyzing design packages and plots.
- Analyze a play's structure, character, themes and production values.
- Differentiate among major periods in theatre history.

### Scholastic Preparation

In order to finish a Theatre degree in two years, full-time students should have completed all prerequisites and have no college preparatory requirements. Many individuals, especially part-time students and those taking preparatory courses, will require additional semesters of study. Students should consult their academic advisor for help planning their schedules.

### Transfer Options

Transfer institutions make the determination in acceptance of credit. The student should consult with an academic advisor and the intended transfer institution when planning a schedule of classes. With careful scheduling and advising, a student should be able to transfer with junior standing, especially within the state of Ohio.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
THE 1111	Stagecraft I	3
THE 1130	Theatre Appreciation	3
THE 1121	Theatre Technology Practicum I	1
- -	OT 36 Math Elective *	3
- -	OT 36 Social and Behavioral Sciences Elective **	3

**Spring**

ENG 1112	English II	3
COM 1120	Public Speaking I	3
THE 1133	Script Analysis	3
THE 2201	Acting I	3
THE 1101	Acting Practicum I	1
- -	OT 36 Social and Behavioral Sciences Elective **	3

**Fall**

ASL 1111	Beginning American Sign Language, Course I	or
SPN 1111	Beginning Spanish, Course I	3
THE 2241	Theatre History I	3
THE 1102	Acting Practicum II	or
THE 1122	Theatre Technology Practicum II	1
- -	Theatre Elective ***	3
- -	OT 36 Natural Sciences Elective ^	4

**Spring**

ASL 1112	Beginning American Sign Language, Course II	or
SPN 1112	Beginning Spanish, Course II	3
THE 2242	Theatre History II	3
THE 2103	Acting Practicum III	or
THE 2123	Theatre Technology Practicum III	1
- -	OT 36 Natural Sciences Elective ^	4
- -	OT 36 Arts and Humanities Elective (outside THE) ^^	3
	Total Credit Hours	61

\*Ohio Transfer 36 Math Electives: MTH 1070 (recommended), 1280, 1340, 2100, 2200, 2220, 2242, 2430, STT 2640

\*\*Ohio Transfer 36 Social and Behavioral Sciences electives from two different areas: PSY 1111 recommended, other options include ECO, GEO 1100, 2200, PLS, PSY 1111, 2223, 2230, SOC

\*\*\*Theatre Elective: THE 1112, 2202, 2235, 2280

^Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

^^Ohio Transfer 36 Arts and Humanities Elective outside THE: ART 1001, 1002, 1300, ENG 1600, 2300, 2510, 2520, 2610, 2620, HST, MUS 1130, PHL

**Associate of Science General Transfer**

The Associate of Science General Transfer degree provides the foundational knowledge and skills in general education that are often required to pursue a bachelor's degree. Courses in this program focus on the areas of English, communication, literature, arts, humanities, social sciences, mathematics, and natural sciences. As a part of the degree, students will also choose electives based on interest and any requirements of the transfer institution. Any elective hours should be planned carefully with an advisor to ensure transferability.

Focused pathways within the Associate of Science are currently available in biology, business, economics, geology, mathematics, physics and psychology to help focus the elective courses within this program. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Science program, particularly at state institutions in Ohio.

**Global Awareness**

In recognition of the growing importance of global awareness, the Associate of Science degree requires students to take at least four courses with significant international content. Courses meeting this requirement are identified in the College catalog and are fulfilled as a part of the requirements within the concentration or elective area.

**Advanced Courses**

All students pursuing the Associate of Science degree are required to complete at least nine credit hours in courses numbered 2000 or higher. These classes are taken as a part of the requirements within the concentration or elective area.

**Embedded Certificate**

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

**Learning Outcomes**

Upon completion of an Associate of Science General Transfer degree, a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

**Transfer Options**

Clark State has detailed transfer agreements with many local colleges and universities. The greatest number of these are with Wright State University and are in areas such as Business, English, Math, Pre-Teacher Education, and Psychology. Check the transfer guide section of the Clark State website for more information about these transfer agreements.

Transfer institutions make the determination in acceptance of credit. The student should consult with an academic advisor and the intended transfer institution when planning a schedule of classes. With careful scheduling and advising, a student should be able to transfer with junior standing, especially within the state of Ohio.

Course #	Course Title	Credit Hours
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**Fall**

FYE 1101	College Success	1
ENG 1111	English I	3
--	OT 36 Math Elective *	3
--	OT 36 Social and Behavioral Sciences Elective **	3
--	Elective ~	3

**Spring**

ENG 1112	English II	or
COM 1120	Public Speaking I	3
--	OT 36 Literature, Arts and Humanities Elective ^	3
--	OT 36 Math or Natural Sciences Elective ^^	4
--	Elective (2000 level) ~	3
--	Elective ~	3

**Fall**

--	OT 36 Natural Sciences Elective ^^	4
--	OT 36 Social and Behavioral Sciences Elective **	3
--	OT 36 Math or Natural Sciences Elective ^^	3
--	Elective (2000 level) ~	3
--	Elective ~	3

**Spring**

--	OT 36 Natural Sciences Elective ^^	4
--	OT 36 Literature, Arts and Humanities Elective ^	3
--	Elective (2000 level) ~	3
--	Elective ~	3
--	Elective ~	2
	Total Credit Hours	60

\*Ohio Transfer 36 Math Electives: MTH 1070, 1280, 1340, 2100, 2200, 2220, 2242, 2430, STT 2640

\*\*Ohio Transfer 36 Social and Behavioral Sciences Electives from at least two different areas: ECO, GEO 1100, 2200, PLS, PSY 1111, 2223, 2230, SOC

\*\*\*Ohio Transfer 36 Elective: Arts, Communication, Humanities, Math, Social and Behavioral Sciences, Natural Sciences options. Consult an advisor for course selection based on the transfer institution.

^Ohio Transfer 36 Literature, Arts and Humanities Electives from at least two different areas: ART 1001, 1002, 1300, ENG 1600, 2300, 2510, 2520, 2610, 2620, HST, MUS 1130, PHL, THE 1130, 1133, 2241, 2242

^^Ohio Transfer 36 Math or Natural Sciences Electives: MTH 1070, 1280, 1340, 2100, 2200, 2220, 2242, 2430, STT 2640, BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY. Consult an advisor for course selection based on the transfer institution.

-General electives include most college level courses in the academic catalog. At least nine credit hours of 2000 level courses are required. Consult an advisor for course selection based on the transfer institution.

^^^Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

## Associate of Science General Transfer - Mathematics Pathway

The Math Pathway of the Associate of Science General Transfer degree emphasizes transfer preparation for pursuing a bachelor's degree in mathematics or statistics. The skill sets acquired through a degree focused in mathematics or statistics are applicable to many careers where students can:

- Use advanced mathematical and analytical methods to help solve complex issues
- Analyze data and apply computational techniques to solve problems
- Apply algorithms to models predicting outcomes
- Design and implement database structures
- Teach mathematics and statistics
- Become an actuary

An Associate of Science degree provides the foundational knowledge and skills in general education that are often required to pursue a Bachelor's degree. Courses in this pathway focus on mathematics and statistics include College Algebra, Calculus, and Statistics. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Science program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Science degree in Mathematics a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
MTH 2200	Calculus I	5
- -	OT 36 Arts and Humanities Elective *	3
- -	OT 36 Social and Behavioral Sciences Elective **	3
<b>Spring</b>		
ENG 1112	English II	3
MTH 2220	Calculus II	5
- -	OT 36 Natural Sciences Elective ***	4
- -	OT 36 Social and Behavioral Sciences Elective **	3
<b>Fall</b>		
MTH 2242	Multivariable Calculus	5
- -	OT 36 Natural Sciences Elective ***	4
- -	OT 36 Arts and Humanities Elective *	3
- -	Elective ^	3
<b>Spring</b>		
- -	Differential Equations (Course Sharing) ^^	3
- -	Matrix Algebra (Course Sharing) ^^	4
- -	Elective (GA) ^	3
- -	Elective (GA) ^	3
- -	Elective ^	3
Total Credit Hours		61

\*Ohio Transfer 36 Arts and Humanities Electives from two different areas: ART 1001, 1002, 1300, ENG 1600, 2300, 2510, 2520, 2610, 2620, HST, MUS 1130, PHL, THE 1130, 1133, 2241, 2242

\*\*Ohio Transfer 36 Social and Behavioral Sciences Electives from two different areas: ECO, GEO 1100, 2200, PLS, PSY 1111, 2223, 2230, SOC

\*\*\*For BS path, PHY 1100 and PHY 2501 required. For BA path, OT 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY.

^For BS path, PHY 2502 required and only 2 electives (GA) are needed to meet 60 credit hour requirement. For BA path, general electives include most college level courses in the academic catalog. Consult an advisor for course selection based on the transfer institution.

^^Courses not currently offered at Clark State. Consult academic advisor for course sharing options.

GA: This degree requires at least two courses with significant international content designated as Global Awareness courses.

## Associate of Science General Transfer - Biology Pathway

The Biology Pathway of the Associate of Science emphasizes transfer preparation for students to pursue a bachelor's degree in science. An Associate of Science degree provides the foundational knowledge and skills in general education that are often required within a Bachelor's degree. Courses in this pathway focus on the natural sciences including biology, physics, and chemistry. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Science program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Science degree in Biology a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

### Course # Course Title Credit Hours

#### Fall

FYE 1101	College Success	1
ENG 1111	English I	3
BIO 1510	Biology I	5
CHM 1210	General Chemistry I	5
- -	OT 36 Social and Behavioral Sciences Elective (GA) *	3

#### Spring

ENG 1112	English II	3
BIO 1520	Biology II	5
CHM 1220	General Chemistry II	5
- -	OT 36 Social and Behavioral Sciences Elective *	3

#### Fall

MTH 2200	Calculus I	5
PHY 1501	General Physics I with Algebra	or
PHY 2501	College Physics I with Calculus	5
- -	Organic Chemistry I (course sharing)	**
		5

#### Spring

- -	OT 36 Arts and Humanities Elective (GA) ***	3
- -	OT 36 Arts and Humanities Elective (2000 level) ***	3
- -	Elective (2000 level) ^	3
- -	Organic Chemistry II (course sharing)	5
	^^	5
	Total Credit Hours	62

\*Ohio Transfer 36 Social and Behavioral Sciences Electives from two different areas: ECO, GEO 1100, 2200, PLS 1300, 2300, PSY 1111, 2223, 2230, SOC

\*\*Organic Chemistry I is not currently offered at Clark State. Consult advisor for course sharing options.

\*\*\*Ohio Transfer 36 Arts and Humanities Electives from two different areas: ART 1001, 1002, 1300, ENG 1600, 2300, HST, MUS 1130, PHL 2100, 2300, 2400, THE 1130, 2241, 2242

^General electives include most college level courses in the academic catalog. At least nine credit hours of 2000 level courses are required for this degree. Consult an advisor to select an appropriate course based on the transfer institution.

^^Organic Chemistry II is not currently offered at Clark State. Consult with advisor and transfer institution for options.

GA This degree requires at least two courses with significant international content designated as Global Awareness.



## Associate of Science General Transfer - Chemistry Pathway

The Chemistry Pathway of the Associate of Science emphasizes transfer preparation for students to pursue a bachelor's degree in science. An Associate of Science degree provides the foundational knowledge and skills in general education that are often required within a Bachelor's degree. Courses in this pathway focus on the natural sciences including physics and chemistry. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Science program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available at <https://transfercredit.ohio.gov/students/student-programs/ogtp>

### Course # Course Title Credit Hours

#### Fall

FYE 1101	College Success	1
CHM 1210	General Chemistry I	5
MTH 2200	Calculus I	5
ENG 1111	English I	3
- -	OT 36 Social and Behavioral Sciences Elective (GA) *	3

#### Spring

CHM 1220	General Chemistry II	5
MTH 2220	Calculus II	5
ENG 1112	English II	3
- -	OT 36 Social and Behavioral Sciences Elective *	3

#### Fall

PHY 2501	College Physics I with Calculus	5
- -	Organic Chemistry I (Course Sharing) **	5
- -	OT 36 Arts and Humanities Elective (GA) ***	3
- -	Elective ^	3

#### Spring

PHY 2502	College Physics II with Calculus	5
- -	Organic Chemistry II (Course Sharing) **	5
- -	OT 36 Arts and Humanities Elective ***	3
	Total Credit Hours	62

\*Ohio Transfer 36 Social and Behavioral Sciences Electives from two different areas: GEO 1100, 2200, PLS 1300, 2300, PSY 1111, 2223, 2230, SOC

\*\*Courses not currently offered at Clark State. Consult academic advisor for course sharing options.

\*\*\* Ohio Transfer 36 Arts and Humanities Electives from two different areas: ART 1001, 1002, 1300, ENG 1600, 2300, HST, MUS 1130, PHL 2100, 2300, 2400, THE 1130, 2241, 2242

^General electives include most college level courses in the academic catalog. Consult an advisor for course selection based on the transfer institution.

GA - This degree requires at least two courses with significant international content designated as Global Awareness courses.

## Associate of Science General Transfer - Economics Pathway

The Economics Pathway of the Associate of Science degree emphasizes transfer preparation to pursue a bachelor's degree in economics. An Associate of Science degree provides the foundational knowledge and skills in general education that are often required within a Bachelor's degree. Courses in this pathway focus on microeconomics, macroeconomics, accounting, marketing and management. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Science program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an associate degree in Economics a graduate will be able to meet the goals outlined for the general Associate of Sciences; additionally, the student will:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult his/her academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

### Course # Course Title Credit Hours

#### Fall

FYE 1101	College Success	1
ENG 1111	English I	3
ACC 1100	Introduction to Financial Accounting	4
STT 2640	Elementary Statistics I	3
- -	Elective *	3

#### Spring

ENG 1112	English II	3
MTH 1280	College Algebra	4
ECO 2220	Principles of Microeconomics	3
- -	OT 36 Natural Sciences Elective **	4

#### Fall

MTH 2100	Calculus for the Management, Life and Social Sciences	or
MTH 2200	Calculus I	5
ECO 2210	Principles of Macroeconomics	3
SPN 1111	Beginning Spanish, Course I	or
ASL 1111	Beginning American Sign Language, Course I	3
- -	OT 36 Arts and Humanities Elective ***	3
- -	Elective *	3

#### Spring

SPN 1112	Beginning Spanish, Course II	or
ASL 1112	Beginning American Sign Language, Course II	3
- -	OT 36 Natural Sciences Elective **	4
- -	OT 36 Arts and Humanities Elective ***	3
- -	OT 36 Social and Behavioral Sciences Elective (outside ECO) ^	3
- -	Elective *	3
	Total Credit Hours	61

\*General electives include most college level courses in the academic catalog. Consult an advisor to select an appropriate course based on the transfer institution.

\*\*Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

\*\*\*Ohio Transfer 36 Arts and Humanities Electives from two different areas: ART 1001, 1002, 1300, ENG 1600, 2300, HST, MUS 1130, PHL 2100, 2300, 2400, THE 1130, 2241, 2242

^Ohio Transfer 36 Social and Behavioral Sciences Elective outside ECO: GEO 1100, 2200, PLS 1300, 2300, PSY 1111, 2223, 2230, SOC

## Associate of Science General Transfer - Geology Pathway

The Geology Pathway of the Associate of Science General Transfer degree emphasizes transfer preparation for students to pursue a bachelor's degree in Geology or Earth Sciences. The skill sets acquired through a degree focused on Geology are applicable to many career areas of the Earth Sciences including:

- Environmental sector for site remediation and clean up
- Petroleum industry for oil exploration and reclamation
- Mining industry
- Teaching in Earth Sciences for K-12 level

An Associate of Science degree provides the foundational knowledge and skills in general education that are often required to pursue a bachelor's degree. Courses in this pathway will develop and increase problem solving skills, out of the box thinking, and logical processes to explain and understand the world around you. This curriculum is designed to prepare students for seamless transfer into a Bachelor of Arts or Sciences program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Science degree in Geology a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
CHM 1210	General Chemistry I	5
MTH 2200	Calculus I	5
<b>Spring</b>		
ENG 1112	English II	3
CHM 1220	General Chemistry II	5
GST 1400	Mapping and Georeferencing with GIS	or
GLG 1133	Environmental Geology	3
- -	OT 36 Social and Behavioral Sciences Elective *	3
<b>Fall</b>		
PHY 1501	General Physics I with Algebra	or
PHY 2501	College Physics I with Calculus	5
GLG 1131	Physical Geology	4
- -	OT 36 Social and Behavioral Sciences Elective *	3
- -	OT 36 Arts and Humanities Elective **	3
- -	Elective (GA) ^	3
<b>Spring</b>		
GLG 1132	Historical Geology	4
- -	OT 36 Arts and Humanities Elective **	3
- -	Elective (2000 level) ^	3
- -	Elective (2000 level) ^	3
- -	Elective (GA) ^	3
Total Credit Hours		62

\*Ohio Transfer 36 Social and Behavioral Sciences Electives from at least two different areas: ECO, GEO 1100, 2200, PLS, PSY 1111, 2223, 2230, SOC

\*\*Ohio Transfer 36 Arts and Humanities Electives from at least two different areas: ART 1001, 1002, 1300, ENG 1600, 2300, 2510, 2520, 2610, 2620, HST, MUS 1130, PHL 2000, 2100, 2300, 2400, THE 1130, 1133, 2241, 2242

^General electives include most college level courses in the academic catalog. Consult an advisor to select an appropriate course based on the transfer institution. Only one additional elective may be needed, if 60 credit hour degree requirement met. At least 9 credits within the degree are required to be 2000 level.

GA This degree requires at least two courses with significant international content designated as Global Awareness courses.

## Associate of Science General Transfer - Physics Pathway

The Physics Pathway of the Associate of Science emphasizes transfer preparation for students to pursue a bachelor's degree in science. An Associate of Science degree provides the foundational knowledge and skills in general education that are often required within a Bachelor's degree. Courses in this pathway focus on mathematics and the natural sciences including chemistry, physics, and Calculus. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Science program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Science degree in Physics a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

### Course # Course Title Credit Hours

#### Fall

FYE 1101	College Success	1
CHM 1210	General Chemistry I	5
MTH 2200	Calculus I	5
ENG 1111	English I	3

#### Spring

CHM 1220	General Chemistry II	5
MTH 2220	Calculus II	5
ENG 1112	English II	3
- -	OT 36 Social and Behavioral Sciences Elective *	3

#### Fall

PHY 2501	College Physics I with Calculus	5
MTH 2242	Multivariable Calculus	5
- -	OT 36 Arts and Humanities Elective (GA) **	3
- -	OT 36 Arts and Humanities Elective (GA) **	3

#### Spring

PHY 2502	College Physics II with Calculus	5
- -	OT 36 Social and Behavioral Sciences Elective *	3
- -	Differential Equations (Course Sharing) ***	4
- -	Linear Algebra (Course Sharing) ***	3
	Total Credit Hours	61

\*Ohio Transfer 36 Social and Behavioral Sciences Electives from two different areas: ECO, GEO 1100, 2200, PLS, PSY 1111, 2223, 2230, SOC

\*\*Ohio Transfer 36 Arts and Humanities Electives from two different areas: ART 1001, 1002, 1300, ENG 1600, 2300, HST, MUS 1130, PHL 2100, 2300, 2400, THE 1130, 2241, 2242

\*\*\*Not currently offered at Clark State. Consult advisor for course sharing options.

GA: This degree requires at least two courses with significant international content designated as Global Awareness courses.

## Associate of Science General Transfer - Psychology Pathway

The Psychology Pathway of the Associate of Science General Transfer degree emphasizes transfer preparation for students to pursue a bachelor's degree in Psychology. The skill sets acquired through a degree focused in Psychology include:

- Judgment and decision-making
- Analytical thinking
- Critical thinking
- Information management
- Oral communication
- Written communication
- Adaptability
- Collaboration
- Inclusivity
- Creativity

Many of these skills overlap with those identified by the [American Psychological Association](#).

An Associate of Science degree provides the foundational knowledge and skills in general education that is often required to pursue a Bachelor's degree. Courses in this pathway focus on the study of mental functions and behaviors. The curriculum is designed to prepare students for seamless transfer into a Bachelor of Science program, particularly at state institutions in Ohio.

### Embedded Certificate

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

### Learning Outcomes

Upon completion of an Associate of Science degree in Psychology a graduate will be able to:

- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Transfer Options

Students seeking a transfer degree should plan the details of their program of study at Clark State according to the requirements of the transfer institution. Transfer institutions make the determination in acceptance of credit. The student should consult their academic advisor and the intended transfer institution when planning a schedule of classes.

Pathway options for transferability to other state institutions is available on [Transfer Credit Ohio's website](#).

Course #	Course Title	Credit Hours
<b>Fall</b>		
FYE 1101	College Success	1
ENG 1111	English I	3
PSY 1111	Introduction to Psychology	3
MTH 1280	College Algebra	4
BIO 1510	Biology I	or
CHM 1210	General Chemistry I	5
<b>Spring</b>		
ENG 1112	English II	3
PSY 2223	Lifespan Human Growth and Development	3
- -	OT 36 Arts Elective *	3
- -	OT 36 Natural Sciences Elective **	4
- -	Elective ***	3
<b>Fall</b>		
PSY 2250	Introduction to Social Psychology	3
STT 2640	Elementary Statistics I	3
- -	OT 36 Social and Behavioral Sciences Elective (outside PSY) ^	3
- -	Elective ***	3
- -	Elective ***	3
<b>Spring</b>		
PSY 2230	Abnormal Psychology	3
PSY 2240	Psychology of Personality	3
- -	Elective ***	3
- -	OT 36 Humanities Elective ^^	3
- -	Elective ***	3
Total Credit Hours		62

\*Ohio Transfer 36 Arts Elective: ART 1001, 1002, 1300, MUS 1130, THE 1130, 1133, 2241, 2242

\*\*Ohio Transfer 36 Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM, GLG, PHY

\*\*\*General electives include most college level courses in the academic catalog. Consult an advisor for course selection based on the transfer institution.

^Ohio Transfer 36 Social and Behavioral Sciences Electives outside PSY: ECO, GEO 1100, 2200, PLS, SOC

^^Ohio Transfer 36 Humanities Electives: ENG 1600, 2300, 2510, 2520, 2610, 2620, HST, PHL



## Associate of Science General Transfer- Agriculture Pathway

The Associate of Science Agriculture Pathway curriculum is designed to prepare students to transfer to a four-year institution to complete a degree in Agriculture or Agricultural business. Four-year institutions generally require students to spend a significant portion of their first two years taking courses that build their knowledge and skills in general education. Graduates of this program should have many of the general education requirements fulfilled and transferred upon the completion of this program.

### Learning Outcomes

Upon completion of an Associate of Science in Agriculture, a graduate will be able to:

- Develop a written agricultural business plan.
- Locate and use current information in solving technical and critical thinking problems.
- Write clearly and accurately in a variety of contexts and formats.
- Speak clearly and accurately in a variety of contexts and formats.
- Use critical thinking and problem solving to draw logical conclusions.
- Use numerical data to solve problems, explain phenomena, and make predictions.
- Successfully transfer to a baccalaureate degree program.

### Course # Course Title Credit Hours

#### Fall

AGR 1250	Animal Agriculture	3
AGR 1300	Soil Science	4
BIO 1510	Biology I	5
ENG 1111	English I	3
FYE 1101	College Success	1

#### Spring

CHM 1210	General Chemistry I	5
ENG 1112	English II	3
MTH 1280	College Algebra	4
SOC 1110	Introduction to Sociology	3

#### Fall

AGR 2200	Crop Production	3
AGR 2700	Ag Business Management	4
ECO 2210	Principles of Macroeconomics	3
MTH 1340	Pre-Calculus	5

#### Spring

COM 1120	Public Speaking I	3
ECO 2220	Principles of Microeconomics	3
ENG 2300	Great Books: World Literature	3
HST 1110	Western Civilization to 1600	or
HST 1210	American History to 1865	3
PHL 2000	Critical Thinking	3
	Total Credit Hours	61

This degree program contains one or more embedded certificates which will automatically be awarded if the certificate requirements are met unless students contact Records and Registration and indicate they do not wish to have the certificate credential awarded.

## TRANSFER CERTIFICATES

### Ohio Transfer 36 Certificate

Students pursuing the Ohio Transfer 36 certificate will learn the foundational knowledge and skills in general education applicable to an Associate of Arts or Associate of Science degree. This certificate also provides a pathway toward transfer to a four-year school to pursue a bachelor's degree.

### Course # Course Title Credit Hours

#### Fall

--	English and Communication	3
--	Arts and Humanities Elective	3
--	Math Elective	3
--	Natural Science Elective	3
--	Social and Behavioral Sciences	
	Elective	3
--	Concentration/Elective	3

#### Spring

--	Arts and Humanities Elective	3
--	Natural Science Elective	3
--	Social and Behavioral Sciences	
	Elective	3
--	Concentration/Elective	3
--	Concentration/Elective	3
--	Concentration/Elective	3
	Total Credit Hours	36

English and Communication Electives: ENG 1111, ENG 1112, COM 1120

Arts and Humanities Electives taken from two subject areas: ART 1001, 1002, 1300, ENG 1600, 2300, 2510, 2520, 2610, 2620, HST 1110, 1120, 1210, 1220, 1410, 1420, MUS 1130, PHL 2000, 2100, 2300, 2400, THE 1130, 1133, 2241, 2242  
Math Electives: MTH 1070, 1280, 1340, 2100, 2200, 2220, 2330, 2430, 2530, STT 2640

Natural Sciences Electives: BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM 1150, 1160, 1210, 1220, GLG 1131, 1132, 1133, PHY 1100, 1501, 1502, 2501, 2502

Social and Behavioral Sciences Electives taken from two subject areas: ECO 1100, 2210, 2220, GEO 1100, 2200, PLS 1100, 1300, 2300, 2400, PSY 1111, 2223, 2230, RST 2700, 2800, SOC 1110, 2220, 2230, 2240, 2250

Concentration Electives: ART 1001, 1002, 1300, BIO 1410, 1420, 1510, 1520, 2121, 2122, CHM 1150, 1160, 1210, 1220, COM 1120, ECO 1100, 2210, 2220, ENG 1111, 1112, 1600, 2300, 2510, 2520, 2610, 2620, GEO 1100, 2200, GLG 1131, 1132, 1133, HST 1110, 1120, 1210, 1220, 1410, 1420, MTH 1070, 1280, 1340, 2100, 2200, 2220, 2330, 2430, 2530, MUS 1130, PHL 2000, 2100, 2300, 2400, PHY 1100, 1501, 1502, 2501, 2502, PLS 1100, 1300, 2300, 2400, PSY 1111, 2223, 2230, RST 2700, 2800, SOC 1110, 2220, 2230, 2240, 2250, STT 2640, THE 1130, 1133, 2241, 2242



# Course Descriptions

## (ACC) ACCOUNTING

### ACC 1000 Accounting Concepts (3)

Contact hours (3 total): 3 lecture

Survey of financial accounting for nonaccounting majors. Accounting concepts, financial statements, internal control, cash, receivables, inventories, plant and equipment, liabilities, and payroll. Course does not substitute for ACC 1100.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher, and NextGen Accuplacer math score of 220 or greater

Terms Offered: Fall, Spring

### ACC 1100 Introduction to Financial Accounting (4)

Contact hours (5 total): 3 lecture, 2 lab

Fundamental accounting concepts, terms, and procedures. Emphasis on analyzing, classifying, and recording accounting data.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher and NextGen Accuplacer math score of 220 or greater

Terms Offered: Fall, Spring, Summer

### ACC 1200 Managerial Accounting (4)

Contact hours (5 total): 3 lecture, 2 lab

Theories, standards, and practices related to the analysis of accounting data as part of the managerial process of planning, decision making, and control.

Prerequisite(s): ACC 1100

Terms Offered: Fall, Spring

### ACC 1300 Payroll Accounting (2)

Contact hours (2 total): 2 lecture

Practical application of payroll tax laws and requirements. Use of manual and computerized systems; payroll registers, tax returns, and deposit coupons.

Prerequisite(s): ACC 1000 or ACC 1100

Terms Offered: Fall, Spring

### ACC 1400 Computerized Accounting (3)

Contact hours (3 total): 3 lecture

Integrated accounting systems applications. Creation of accounting records and financial statements using QuickBooks Online. Study of both service and merchandising businesses.

Prerequisite(s): ACC 1100

Terms Offered: Fall, Spring

### ACC 2000 Spreadsheet Accounting (3)

Contact hours (3 total): 3 lecture

Accounting applications applied using Microsoft Excel. Financial statement preparation, aging of accounts receivable, loan amortization, ratio analysis, payroll, depreciation, fixed assets covered. Emphasis on sorting, filtering, and formatting.

Prerequisite(s): ACC 1100 and ITS 1235

Terms Offered: Fall, Spring

### ACC 2100 Intermediate Accounting I (4)

Contact hours (4 total): 4 lecture

Conceptual framework, standard-setting concepts and principles of both US Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS), balance sheet, income statement, statement of shareholders' equity, statement of cash flows, and disclosures.

Prerequisite(s): ACC 1100 with a grade of C or higher

Terms Offered: Fall

### ACC 2200 Intermediate Accounting II (4)

Contact hours (4 total): 4 lecture

US Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) applied to fixed assets, intangibles, investments, liabilities, income taxes, stockholders' equity, and statement of cash flows.

Prerequisite(s): ACC 2100 with a grade of C or higher

Terms Offered: Spring

### ACC 2300 Cost Accounting (3)

Contact hours (3 total): 3 lecture

Cost accounting principles including job order cost, process cost, and standard cost accounting. Variance analysis and budgeting also covered.

Prerequisite(s): ACC 1200

Terms Offered: Spring

### ACC 2400 Tax Accounting (4)

Contact hours (4 total): 4 lecture

Theory of individual taxes and their application under the Internal Revenue Code. Preparation of individual tax returns. Introduction to federal business tax law.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall

## (AGR) AGRICULTURE

### AGR 1100 Ag Survey and Professional Development (4)

Contact hours (4.5 total): 3.5 lecture, 1 lab

Exploration of agriculture and horticulture career opportunities. Assessment and development of professional skills, including goals, employability skills, student responsibilities, and industry expectations. Using electronic media for information gathering, presentations, communication, and data management.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$10.00

Terms Offered: Fall, Spring

### AGR 1150 Plant Science (4)

Contact hours (5 total): 3 lecture, 2 lab

Describe the importance of plants. Identify plant structures and describe their functions. Characterize plant growth and development. Explain physiological functions. Describe basic plant breeding and genetics. Classify plants taxonomically. Examine plant interactions with the environment and other species. Characterize environmentally sound irrigation and fertilization.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$25.00

Terms Offered: Spring

### AGR 1175 Cannabis (3)

Contact hours (3 total): 3 lecture

Historical and modern uses of cannabis. Cannabis use in modern society, economy, and politics. Medical effects of cannabis. Evolution, classification, and growth of the cannabis plant.

Pre/Corequisite(s): ENG 0980 or ENG 0900 with a grade of C or higher and students must be at least 18 years of age to enroll in the course.

Global Awareness.

Terms Offered: Spring



### **AGR 1201 Pesticide Safety and Application (1)**

Contact hours (1 total): 1 lecture

Safe handling, use, and application of pesticides.

Individualized study in the student's area of interest.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall

### **AGR 1250 Animal Agriculture (3)**

Contact hours (3 total): 3 lecture

Animal science focusing on the economic importance of the animal production industry. Identification of species, breeds, and general production techniques. Feeds, nutrition, animal health, environmental concerns, and facility requirements.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$10.00

Terms Offered: Spring

### **AGR 1300 Soil Science (4)**

Contact hours (5 total): 3 lecture, 2 lab

A basic understanding of soils; the study of soil formation, physical properties, water movement, organic matter, and soil organisms.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$30.00

Terms Offered: Fall

### **AGR 1400 Turfgrass Science (3)**

Contact hours (4 total): 2 lecture, 2 lab

Role of turfgrass in the green industry. Classification and structure of grasses. Development of best cultural practices for landscapes, public areas, sports fields, and golf courses, including establishment, mowing, fertilization, aeration, and irrigation.

Pre/Corequisite(s): ENG 0980 or ENG 0900 with a grade of C or higher

Lab Fee: \$20.00

Terms Offered: Fall

### **AGR 1500 Landscape Design (4)**

Contact hours (6 total): 2 lecture, 4 lab

A study of landscape design concepts and principles. Emphasis on site survey; site planning; landscape plant utilization; and development of basic sketching, drawing, lettering, and labeling skills.

Pre/Corequisite(s): ENG 0980 or ENG 0900 with a grade of C or higher

Lab Fee: \$30.00

Terms Offered: Spring

### **AGR 1650 Landscape Maintenance and Construction (4)**

Contact hours (5 total): 3 lecture, 2 lab

Fundamental principals and practices of landscape maintenance and construction. Site survey, planning, materials, safety principles, proper pruning, planting, mulching, fertilizing, water management, soil preparation, tool and equipment operation. Development of job specification, bids, workforce and project management

Pre/Corequisite(s): ENG 0980 or ENG 0900 with a grade of C or higher

Lab Fee: \$50.00

Terms Offered: Fall

### **AGR 1750 Precision Agriculture (3)**

Contact hours (3 total): 3 lecture

Introduction to precision agriculture, including history, applications, terminology, platforms, data, software, and associated components. Exploration of precision agriculture career opportunities.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$50.00

Terms Offered: Fall, Spring

### **AGR 1800 Welding (4)**

Contact hours (5 total): 3 lecture, 2 lab

Introduction to welding techniques such as Stick, MIG, TIG, and oxyacetylene welding. Additional skill development in oxyacetylene brazing, cutting, and plasma cutting.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$80.00

Terms Offered: Spring

### **AGR 1850 Explorations in Agriculture Welding (3)**

Contact hours (4 total): 2 lecture, 2 lab

Basic welding and cutting practices within the agriculture industry, cost analysis of welding operations within agriculture.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Spring

### **AGR 2000 Co-op Experience in Ag Business Part I (1)**

Work experience in the student program area. Minimum of 150 hours at an agribusiness selected by the student.

Work plan and goals development.

Prerequisite(s): AGR 1100 with a grade of C or higher and a minimum of 10 technical hours.

Instructor Permission Required.

Terms Offered: Spring

### **AGR 2001 Co-op Experience in Ag Business Part II (1)**

Work experience in the student program area. Minimum of 150 hours at an agribusiness selected by the student.

Work plan and goals development. Documentation and analysis of work experience.

Prerequisite(s): AGR 2000 with a grade of C or higher

Instructor Permission Required.

Terms Offered: Spring

### **AGR 2002 Co-op Experience in Ag Engineering Part I (1)**

Work experience in the student program area. Minimum of 150 hours at an ag engineering business selected by the student. Work plan and goals development.

Prerequisite(s): AGR 1100 with a grade of C or higher and a minimum of 10 technical hours.

Instructor Permission Required.

Terms Offered: Spring

### **AGR 2003 Co-op Experience in Ag Engineering Part II (1)**

Work experience in student program area. 150 hours minimum at an ag engineering business selected by student. Work plan and goals development.

Documentation and analysis of work experience.

Prerequisite(s): AGR 2002 with a grade of C or higher

Instructor Permission Required.

Terms Offered: Spring

**AGR 2004 Co-op Experience in Nursery Ops Part I (1)**

Work experience in student program area. 150 hours minimum at a nursery or similar business selected by student. Work plan and goals development. Prerequisite(s): AGR 1100 with a grade of C or higher and a minimum of 10 technical hours. Instructor Permission Required. Terms Offered: Spring

**AGR 2005 Co-op Experience in Nursery Ops Part II (1)**

Work experience in student program area. 150 hours minimum at a nursery or similar business selected by student. Work plan and goals development. Documentation and analysis of work experience. Prerequisite(s): AGR 2004 with a grade of C or higher. Instructor Permission Required. Terms Offered: Summer

**AGR 2006 Co-op Experience in Natural Resources Part I (1)**

Work experience in student program area. 150 hours minimum in a position maintaining or engineering natural resources selected by student. Work plan and goals development. Prerequisite(s): AGR 1100 with a grade of C or higher and a minimum of 10 technical hours. Instructor Permission Required. Terms Offered: Spring

**AGR 2007 Co-op Experience in Natural Resources Part II (1)**

Work experience in student program area. 150 hours minimum in a position maintaining or engineering natural resources selected by student. Work plan and goals development. Documentation and analysis of work experience. Prerequisite(s): AGR 2006 with a grade of C or higher. Instructor Permission Required. Terms Offered: Spring

**AGR 2009 Co-op Experience in Precision Agriculture Part II (1)**

Work experience in student program area. 150 hours minimum in a precision agriculture position selected by student. Work plan and goals development. Documentation and analysis of work experience. Prerequisite(s): AGR 2080 with a grade of C or higher. Instructor Permission Required. Terms Offered: Spring

**AGR 2010 Co-op Experience in Turf & Landscape Part I (1)**

Work experience in student program area. 150 hours minimum in a lawn and landscape or similar business selected by student. Work plan and goals development. Prerequisite(s): AGR 1100 with a grade of C or higher and a minimum of 10 technical hours. Instructor Permission Required. Terms Offered: Spring

**AGR 2011 Co-op Experience in Turf & Landscape Part II (1)**

Work experience in student program area. 150 hours minimum in a lawn and landscape or similar business selected by student. Work plan and goals development. Documentation and analysis of work experience. Prerequisite(s): AGR 2010 with a grade of C or higher. Instructor Permission Required. Terms Offered: Spring

**AGR 2012 Co-op Experience in Golf Course Ops Part I (1)**

Work experience in student program area. 150 hours minimum at a golf course greenskeeping position selected by student. Work plan and goals development. Prerequisite(s): AGR 1100 with a grade of C or higher and a minimum of 10 technical hours. Instructor Permission Required. Terms Offered: Spring

**AGR 2013 Co-op Experience in Golf Course Ops Part II (1)**

Work experience in student program area. 150 hours minimum at a golf course greenskeeping position selected by student. Work plan and goals development. Documentation and analysis of work experience. Prerequisite(s): AGR 2012 with a grade of C or higher. Instructor Permission Required. Terms Offered: Spring

**AGR 2014 Co-op Experience in Landscape Design Part I (1)**

Work experience in student program area. 150 hours minimum at a landscape design business selected by student. Work plan and goals development. Prerequisite(s): AGR 1100 with a grade of C or higher and a minimum of 10 technical hours. Instructor Permission Required. Terms Offered: Spring

**AGR 2015 Co-op Experience in Landscape Design Part II (1)**

Work experience in student program area. 150 hours minimum at a landscape design business selected by student. Work plan and goals development. Documentation and analysis of work experience. Prerequisite(s): AGR 2014 with a grade of C or higher. Instructor Permission Required. Terms Offered: Spring

**AGR 2080 Co-op Experience in Precision Agriculture Part I (1)**

Work experience in student program area. 150 hours minimum in a precision agriculture position selected by student. Work plan and goals development. Prerequisite(s): AGR 1100 with a grade of C or higher and a minimum of 10 technical hours. Instructor Permission Required. Terms Offered: Spring

**AGR 2100 Woody Plant Materials (4)**

Contact hours (5 total): 3 lecture, 2 lab. Identification of trees, shrubs, ground covers, and related woody plant materials commonly used in the green industry. Prerequisite(s): ENG 0850 with a grade of C or higher, and ENG 0900 with a grade of C or higher. Lab Fee: \$20.00. Terms Offered: Fall



**AGR 2125 Landscape Plant Materials (4)**

Contact hours (5 total): 3 lecture, 2 lab

Identification of trees, shrubs, vines, annuals, perennials, bulbs, grasses, and other related plants commonly used in the green industry.

Prerequisite(s): ENG 0850 with a grade of C or higher and ENG 0900 with a grade of C or higher and AGR 1150

Lab Fee: \$25.00

Terms Offered: Fall

**AGR 2150 Herbaceous Plant Materials (3)**

Contact hours (4 total): 2 lecture, 2 lab

Identification of annuals, biennials, perennials, bulbs, and monocots used in the green industry.

Prerequisite(s): ENG 0850 with a grade of C or higher, and ENG 0900 with a grade of C or higher

Lab Fee: \$20.00

Terms Offered: Spring

**AGR 2200 Crop Production (3)**

Contact hours (3 total): 3 lecture

Adoption, utilization, cultural, and management practices of major agricultural field and forage crops. Product quality and commercial standards associated with crops and use of electronic equipment and software in approved management techniques.

Pre/Corequisite(s): ENG 1111

Lab Fee: \$10.00

Terms Offered: Fall

**AGR 2300 Plant Propagation (4)**

Contact hours (5 total): 3 lecture, 2 lab

Principles and techniques used to propagate floral, greenhouse, and landscape plants. Explore materials, facilities, and structures used by commercial growers.

Prerequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$35.00

Terms Offered: Spring

**AGR 2450 Irrigation Systems (3)**

Contact hours (4 total): 2 lecture, 2 lab

Irrigation system operation and design. Primary emphasis is on turfgrass, golf course, and commercial operations.

Prerequisite(s): ENG 1111 and MTH 1200

Lab Fee: \$20.00

Terms Offered: Spring

**AGR 2500 Advanced Landscape Design (4)**

Contact hours (6 total): 2 lecture, 4 lab

Advanced study and application of landscape design principles and techniques with the emphasis on planning, designing, pricing, and selling diversified landscapes.

Prerequisite(s): AGR 1500

Lab Fee: \$30.00

Terms Offered: Spring

**AGR 2601 Weed Science (3)**

Contact hours (4 total): 2 lecture, 2 lab

Identify weeds. Differentiate categories of weeds and how they are best controlled. Assess various methods of weed control including biological and physical means. Categorize different types of herbicides. Develop a weed control plan.

Pre/Corequisite(s): AGR 1150

Lab Fee: \$30.00

Terms Offered: Fall

**AGR 2602 Plant Pathology (2.5)**

Contact hours (3 total): 2 lecture, 1 lab

Identify major plant diseases. Describe the importance of plant diseases. Compare plant disease causal agents, life cycles, and favorable conditions for disease development. Evaluate plant disease prevention and management strategies. Develop a plant disease control plan.

Pre/Corequisite(s): AGR 1150

Lab Fee: \$20.00

Terms Offered: Spring

**AGR 2603 Plant Insect Pests (2.5)**

Contact hours (3 total): 2 lecture, 1 lab

Identify insects and other arthropods. Describe the importance of insects. Compare different insect orders, insect life cycles, and anatomy. Distinguish between different types of plant damage caused by insects. Evaluate plant insect damage prevention and management strategies. Develop a plant insect pest control plan.

Pre/Corequisite(s): AGR 1150

Lab Fee: \$20.00

Terms Offered: Spring

**AGR 2700 Ag Business Management (4)**

Contact hours (4 total): 4 lecture

An in-depth study of planning, creating, organizing, operating, and managing an agribusiness. Development of a detailed business plan in the student's area of interest.

Pre/Corequisite(s): ENG 1111

Lab Fee: \$10.00

Terms Offered: Fall

**AGR 2751 Advanced Precision Agriculture (4)**

Contact hours (5 total): 3 lecture, 2 lab

Collect and analyze agricultural data with geospatial technologies. Utilize and update precision agriculture software. Install and troubleshoot various hardware components. Create reports and develop prescription maps. Apply results to agricultural systems.

Prerequisite(s): AGR 1750

Lab Fee: \$50.00

Terms Offered: Spring

**AGR 2775 Ag Marketing and Trade (3)**

Contact hours (3 total): 3 lecture

Fundamental principles, policies, problems, structure, and strategy of agricultural marketing and international trade. Development of a marketing plan. Implications of world trade and political aspects of world food production.

Pre/Corequisite(s): ENG 1111

Terms Offered: Spring

**AGR 2800 Equipment Management, Maintenance & Repair (4)**

Contact hours (5 total): 3 lecture, 2 lab

Development of best practices for selection, operation, and management of green industry equipment. Small engine operation, troubleshooting, and overhaul. Rent, lease, buy decisions; depreciation schedules, maintenance schedules, and other fleet resources.

Pre/Corequisite(s): ENG 1111 and MTH 1200

Lab Fee: \$50.00

Terms Offered: Spring

### **AGR 2850 Agricultural Capstone Seminar (3)**

Contact hours (3 total): 3 lecture

Application of knowledge and skills. Use of problem-solving and teaming skills to respond to a series of real-world industry scenarios. Off-site casework may be required.

Prerequisite(s): AGR 2700

Lab Fee: \$10.00

Terms Offered: Spring

### **AGR 2901 Special Topics in Co-op Experience in Ag Business Part I (1)**

Co-op work experience in the student program area.

Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.

Prerequisite(s): AGR 1100 with a grade of C or higher and a minimum of 10 technical hours.

Terms Offered: Spring

### **AGR 2902 Special Topics in Co-op Experience in Ag Business Part II (1)**

Co-op work experience in the student program area.

Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.

Instructor Permission Required.

Terms Offered: Summer

### **AGR 2903 Special Topics in Co-op Experience in Ag Engineering Part I (1)**

Co-op work experience in the student program area.

Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.

Prerequisite(s): AGR 1100 with a grade of C or better and a minimum of 10 technical hours.

Instructor Permission Required.

Terms Offered: Spring

### **AGR 2904 Special Topics in Co-op Experience in Ag Engineering Part II (1)**

Co-op work experience in the student program area.

Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.

Prerequisite(s): AGR 1100 with a grade of C or better and a minimum of 10 technical hours.

Instructor Permission Required.

Terms Offered: Summer

### **AGR 2905 Special Topics in Co-op Experience in Nursery Ops Part I (1)**

Co-op work experience in the student program area.

Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.

Prerequisite(s): AGR 1100 with a grade of C or better and a minimum of 10 technical hours

Instructor Permission Required.

Terms Offered: Spring

### **AGR 2906 Special Topics in Co-op Experience in Nursery Ops Part II (1)**

Co-op work experience in the student program area.

Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.

Prerequisite(s): AGR 1100 with a grade of C or better and a minimum of 10 technical hours

Instructor Permission Required.

Terms Offered: Summer

### **AGR 2907 Special Topics in Co-op Experience in Natural Resources Part I (1)**

Co-op work experience in the student program area.

Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.

Prerequisite(s): AGR 1100 with a grade of C or better and a minimum of 10 technical hours

Instructor Permission Required.

Terms Offered: Spring

### **AGR 2908 Special Topics in Co-op Experience in Natural Resources Part II (1)**

Co-op work experience in the student program area.

Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.

Instructor Permission Required.

Terms Offered: Summer

### **AGR 2909 Special Topics in Co-op Experience in Precision Agriculture Part I (1)**

Co-op work experience in Precision Agriculture. Minimum of 150 hours at an agribusiness selected by the student.

Work plan and goals development. Oral and written reports.

Prerequisite(s): AGR 1100 with grade of C or higher and a minimum of 10 technical hours.

Instructor Permission Required.

### **AGR 2910 Special Topics in Co-op Experience in Precision Agriculture Part II (1)**

Co-op work experience in Precision Agriculture. Minimum of 150 hours at an agribusiness selected by the student.

Work plan and goals development. Oral and written reports.

Instructor Permission Required.

Terms Offered: Summer

### **AGR 2911 Special Topics in Co-op Experience in Turf & Landscape Part I (1)**

Co-op work experience in the student program area.

Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.

Prerequisite(s): AGR 1100 with a grade of C or better and a minimum of 10 technical hours

Instructor Permission Required.

Terms Offered: Spring

### **AGR 2912 Special Topics in Co-op Experience in Turf & Landscape Part II (1)**

Co-op work experience in the student program area. Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.  
Prerequisite(s): AGR 1100 with a grade of C or better and a minimum of 10 technical hours  
Instructor Permission Required.  
Terms Offered: Summer

### **AGR 2913 Special Topics in Co-op Experience in Golf Course Ops Part I (1)**

Co-op work experience in the student program area. Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.  
Prerequisite(s): AGR 1100 with a grade of C or higher  
Instructor Permission Required.  
Terms Offered: Spring

### **AGR 2914 Special Topics in Co-op Experience in Golf Course Ops Part II (1)**

Co-op work experience in the student program area. Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.  
Instructor Permission Required.  
Terms Offered: Summer

### **AGR 2915 Special Topics in Co-op Experience in Landscape Design Part I (1)**

Co-op work experience in the student program area. Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.  
Prerequisite(s): AGR 1100 with a grade of C or higher  
Instructor Permission Required.  
Terms Offered: Spring

### **AGR 2916 Special Topics in Co-op Experience in Landscape Design Part II (1)**

Co-op work experience in the student program area. Minimum of 150 hours at an agribusiness selected by the student. Work plan and goals development. Oral and written reports.  
Instructor Permission Required.  
Terms Offered: Summer

## **(ART) ART**

### **ART 1001 Art History I (3)**

Contact hours (3 total): 3 lecture  
Survey of visual art from prehistoric times through the early Renaissance era.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall

### **ART 1002 Art History II (3)**

Contact hours (3 total): 3 lecture  
Survey of visual art and architecture from the early Renaissance era to the Modern period.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall, Spring, Summer

### **ART 1111 Drawing I (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Line, value, and shape, in developing visual drawing skills. Two- and three-dimensional problems. Study of location of forms in space, their proportion and structure with light and shade as well as perspective. Representational and contemporary problems with complex composition arrangements, dry media, and simple graphite to develop visual skills. Use of still life, landscape, and introduction to some figure work. Line, value, and shape color in developing visual drawing skills. Introduction to figure drawing.  
Prerequisite(s): NextGen Accuplacer reading score of 220+  
Lab Fee: \$25.00  
Terms Offered: Fall, Spring

### **ART 1121 Drawing II (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Interpretation of figure using wet/dry media, black and white, and complex color. For both fine and graphic design artists. Explores use of line value and shape and color in developing visual drawing skills. Two- and three-dimensional problems are given. Study of location of forms in space, their proportion and structure with light and shade as well as perspective. Representational and contemporary problems with complex composition arrangements, wet/dry media, and simple color drawing to develop visual skills. Still life, landscape, and introduction to some figure work. Explores the use of line, value, shape, and color in developing visual drawing skills.  
Prerequisite(s): ART 1111  
Lab Fee: \$80.00  
Terms Offered: Spring

### **ART 1300 Appreciation of the Arts (3)**

Contact hours (3 total): 3 lecture  
Survey of the spectrum of the arts embedded within Western Civilization. Examines and evaluates the aesthetic contributions of painting, sculpture, architecture, music, and dance of each historical period. Individual artworks for each period illustrating the nature and problems of the creative process as it evolved during each specific period from the Paleolithic Period to the Post-Modern Period.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Global Awareness.  
Terms Offered: Fall, Spring, Summer

## **(ASL) AMERICAN SIGN LANGUAGE**

### **ASL 1111 Beginning American Sign Language, Course I (3)**

Contact hours (3 total): 3 lecture  
Basic vocabulary and grammatical elements necessary to communicate with individuals who are Deaf emphasis on developing beginning-level receptive and expressive skills. History of American Sign Language and its development within the United States. Introduction to the unique culture of the Deaf community.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Global Awareness.  
Terms Offered: Fall

### **ASL 1112 Beginning American Sign Language, Course II (3)**

Contact hours (3 total): 3 lecture

Introduction to American Sign Language (ASL) and the Deaf building on the components of the first ASL course. Vocabulary for conversing with individuals who are Deaf. Complex grammatical elements with a greater understanding of application while signing. Emphasis on increasing expressive and receptive skills and Deaf culture with first-hand experience.

Prerequisite(s): ASL 1111 with a grade of C or higher or demonstrated proficiency in indicated area of study Global Awareness.

Terms Offered: Spring

### **ASL 2111 Intermediate American Sign Language, Course I (3)**

Contact hours (3 total): 3 lecture

Intermediate integration of learning outcomes across Interpersonal, Interpretive, and Presentational Modes of Communication. Accomplish real-world communicative tasks in culturally appropriate ways to gain familiarity with products, practices, and perspectives of American Deaf culture. Use of grammar, vocabulary, structures, and spatial orientation to meet functional performance goals and build a foundation for continued language learning. Prerequisite(s): ASL 1112 with a grade of C or higher or demonstrated proficiency in indicated area of study Global Awareness.

Terms Offered: Fall

### **ASL 2112 Intermediate American Sign Language, Course II (3)**

Continuation of intermediate integration of learning outcomes across Interpersonal, Interpretive, and Presentational Modes of Communication. Accomplish real-world communicative tasks in culturally appropriate ways to gain familiarity with products, practices, and perspectives of American Deaf culture. Use of grammar, vocabulary, structures, and spatial orientation to meet functional performance goals and build a foundation for continued language learning.

Prerequisite(s): ASL 2111 with a grade of C or higher or demonstrated proficiency in indicated area of study Global Awareness.

Terms Offered: Spring

## **(BIO) BIOLOGY**

### **BIO 1105 Fundamentals of Anatomy and Physiology (3)**

Contact hours (3 total): 3 lecture

Survey of the structure and function of the human body; special emphasis on the major body systems.

Prerequisite(s): ENG 0980 or ENG 1111

Terms Offered: Fall, Spring, Summer

### **BIO 1110 Basic Human Nutrition (2)**

Contact hours (2 total): 2 lecture

Principles of human nutrition with emphasis on nutrient function, digestion, absorption, metabolism, inter-relationships, and requirements. Explores the influence of socioeconomic, cultural, psychological, and environmental factors on food choices. Incorporates assessment of diet patterns, nutritional health risks, and nutrient needs throughout the life cycle.

Prerequisite(s): ENG 0980 or ENG 1111 and MTH 0500 with a grade of C or higher

Terms Offered: Fall, Spring

### **BIO 1119 Muscle Anatomy and Biomechanics (3)**

Contact hours (5.67 total): 1.67 lecture, 4 lab

Study of muscle, skeleton, joint structure, and function. Origin, insertion, action, and innervation of trunk and extremity musculature. Science of human motion. Systematic application of mechanical laws to movement. Palpation, fundamentals of posture, and gait analysis. Professional behavior development. Laboratory practice. Classroom component online.

Prerequisite(s): none

Pre/Corequisite(s): MST 1105, BIO 2121, ENG 1111, PTA 1112, and PTA 1122

Instructor Permission Required.

Lab Fee: \$75.00

Terms Offered: Fall

### **BIO 1131 Microbiology (3)**

Contact hours (4 total): 2 lecture, 2 lab

Study of infectious diseases of the body. Emphasis on the causes and effects of bacteria, fungi, viruses, and parasites to health. Classroom component offered online and onsite.

Prerequisite(s): ENG 0980 or ENG 1111

Lab Fee: \$100.00

Terms Offered: Fall, Spring, Summer

### **BIO 1410 Fundamentals of Biology (4)**

Contact hours (5 total): 3 lecture, 2 lab

Fundamental concepts in biology including: chemistry essential to understanding living organisms, structure and function of cells, basic concepts of energy in living systems, and introduction to human biology.

Prerequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$60.00

Terms Offered: Fall, Spring, Summer

### **BIO 1420 Global Biology (4)**

Contact hours (5 total): 3 lecture, 2 lab

Basic principles in ecology, evolution, and environmental biology including: diversity of living organisms; interactions between living organisms and the interactions of living organisms with their environment; plant biology and photosynthesis; and mechanisms of evolution and biological aspects of current environmental issues.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Lab Fee: \$70.00

Terms Offered: Fall, Spring, Summer

### **BIO 1510 Biology I (5)**

Contact hours (7 total): 4 lecture, 3 lab

Concepts in chemistry essential to understanding living organisms. Fundamentals of cellular biology. Molecular genetics and patterns of inheritance. Mechanisms of evolution. [Note: intended for students in science majors] Prerequisite(s): CHM 1150 with a grade of C or higher or one year of high school chemistry with a grade of C or higher

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$85.00

Terms Offered: Fall



### **BIO 1520 Biology II (5)**

Contact hours (7 total): 4 lecture, 3 lab

Evolutionary processes relevant to biological diversity. Diversity and classification of living organisms. Structure and function of plants and animals. Ecosystem structure and function. [Note: intended for students in science majors]

Prerequisite(s): BIO 1510 with a grade of C or higher

Lab Fee: \$85.00

Terms Offered: Spring

### **BIO 2121 Anatomy and Physiology I (4)**

Contact hours (5 total): 3 lecture, 2 lab

Human cells, tissues, skin, bones, muscles, nervous system cells; central, peripheral, and autonomic nervous systems; special senses; endocrine system. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): High school biology and chemistry within 5 years with a C or better, BIO 1410 with a C or better within 5 years, or currently practicing LPN or paramedic

Lab Fee: \$35.00

Terms Offered: Fall, Spring, Summer

### **BIO 2122 Anatomy and Physiology II (4)**

Contact hours (5 total): 3 lecture, 2 lab

Human circulatory, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Immunity, nutrition and metabolism, fluid and electrolyte balance/acid-base balance, pregnancy, human development, and heredity. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): BIO 2121

Lab Fee: \$35.00

Terms Offered: Fall, Spring, Summer

### **BIO 2123 Human Cadaver Dissection Lab (1)**

Contact hours (3 total): 3 lab

Human cadaver lab emphasizing hands-on study for the following areas; regional surface anatomy, compartments, anatomical and physiological relationships, musculoskeletal structures, vasculature, and nerve supply of the extremities. General organ systems will be explored: Cranium, thorax, abdomen, pelvis, and musculature of extremities. Collaborative work.

Prerequisite(s): BIO 2121 with a grade of B or higher

Pre/Corequisite(s): BIO 2122

Lab Fee: \$50.00

Terms Offered: Fall, Spring

## **(BNK) BANKING**

### **BNK 1000 Principles of Banking (3)**

Contact hours (3 total): 3 lecture

An introduction to banking services and financial institutions; examination of the principles of banking transactions and various services of a bank. History of banking, item processing, collection functions, procedures, bookkeeping, loans and investments, and trust operations. Overview of the role of the Federal Reserve.

Prerequisite(s): NextGen Accuplacer reading score of 220+

Terms Offered: Fall

### **BNK 1100 Consumer Lending (3)**

Contact hours (3 total): 3 lecture

Comprehend the consumer lending process from developing and taking loan applications to collection and recovery; describe consumer lending laws and regulations; list characteristics, benefits, and disadvantages of direct lending, indirect lending, and open-end credit products; explain how the five C's of credit are used in credit evaluation and decision making.

Prerequisite(s): NextGen Accuplacer reading score of 220+

Terms Offered: Spring

### **BNK 2000 Introduction into Investments (3)**

Contact hours (3 total): 3 lecture

An introduction to the concepts of investing. Addressing the theory and application of investment topics. It provides the basic knowledge about financial markets, valuation of investment tools, and different investment strategies.

Prerequisite(s): BNK 1000

Pre/Corequisite(s): ECO 2210

Terms Offered: Spring

### **BNK 2100 Money & Banking (3)**

Contact hours (3 total): 3 lecture

Theory, methods, and policies on money, the financial system, and monetary policy; ratio analysis; present value techniques; analysis of interest rates; the role of banking and effects of regulation; and analysis and forecasting of monetary and fiscal policy.

Prerequisite(s): ACC 1100

Pre/Corequisite(s): ECO 2210

Terms Offered: Spring

## **(CAD) COMPUTER AIDED DESIGN**

### **CAD 1101 Computer-Aided Design I (3)**

Contact hours (4 total): 2 lecture, 2 lab

AutoCAD software to construct two-dimensional mechanical drawings. AutoCAD commands to produce drawings and fully dimension them according to ANSI standards. Drawings plotted at scale as required.

Pre/Corequisite(s): ENT 1050 or instructor approval

Lab Fee: \$20.00

Terms Offered: Fall, Spring

### **CAD 1310 Residential Architecture and Design (3)**

Contact hours (4 total): 2 lecture, 2 lab

Residential design principles. Preparation of architectural working drawings using Autodesk Revit including floor plans, roof plan, elevations, sections, and schedules. Interior design and photo-realistic rendering.

Prerequisite(s): CAD 1101

Lab Fee: \$20.00

Terms Offered: Fall, Spring

### **CAD 2100 Solid Modeling (3)**

Contact hours (4 total): 2 lecture, 2 lab

Two-dimensional drafting (2D) and three-dimensional (3D) solid model assemblies. Generating 2D/3D elements, integrating 2D/3D elements, creating orthographic views from solid models, and parametric modeling. Inventor and AutoCAD used.

Prerequisite(s): ENT 1050

Lab Fee: \$20.00

Terms Offered: Fall, Spring



### **CAD 2110 SolidWorks (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Three-dimensional modeling using SolidWorks. Basic techniques including revolved parts, ribs and shell features, patterns, and threads. Model assembly, layout assembly, mates, and PhotoView basics. Creation of two-dimensional drawings, assembly drawings, sheet metal drawings, tables, and detailed views.  
Pre/Corequisite(s): ENT 1050  
Lab Fee: \$20.00  
Terms Offered: Fall, Spring

### **CAD 2200 Advanced Solid Modeling (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Advanced 3-D modeling techniques. Presentation files, animation, model analysis, piping systems, and assembly models.  
Prerequisite(s): CAD 2100 or CAD 2110  
Lab Fee: \$20.00  
Terms Offered: Fall

### **CAD 2300 Computer-Aided Manufacturing (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Computer-aided manufacturing using digital manufacturing processes. Three-dimensional (3D) modeling design and assembly techniques. Design validation through simulation, rendering, and animation. Investigation of product development process.  
Prerequisite(s): CAD 2100 or CAD 2110  
Lab Fee: \$25.00  
Terms Offered: Fall, Spring

### **CAD 2310 Introduction to Civil Engineering Technology (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Interpretation of plans for highways, bridges, utilities, and infrastructure projects. Preparation of plans including site, profiles, cross-sections, assemblies, corridors, and intersections. Commercial design plans.  
Prerequisite(s): CAD 1101  
Lab Fee: \$20.00  
Terms Offered: Fall, Spring

## **(CHM) CHEMISTRY**

### **CHM 1150 Introduction to General Chemistry (4)**

Contact hours (5 total): 3 lecture, 2 lab  
Intensive preparation (equivalent to a year of high school chemistry) for General Chemistry (CHM 1210). Introduction to the composition, structure, properties, and transformations of matter, including dimensional analysis, atomic structure, bonding, chemical reactions, states of matter, energy changes, solutions, reaction rates and chemical equilibrium, acids, bases and buffers, introduction to chemical laboratory equipment and methods, including mass and volume measurements, graphing, observing chemical and physical properties, carrying out stoichiometric measurements and titrations, drawing conclusions from experimental data, designing experiments to test hypotheses.(\* Indicates objectives pertinent to the laboratory portion of the course as well as lecture.)  
Prerequisite(s): MTH 0500 with a grade of C or higher,  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Global Awareness.  
Lab Fee: \$65.00  
Terms Offered: Fall, Spring, Summer

### **CHM 1160 Introduction to Organic and Biological Chemistry (4)**

Contact hours (5 total): 3 lecture, 2 lab  
Introduction to the structures, chemical and physical properties of hydrocarbons, alcohols, phenols, ethers, aldehydes, ketones, carbohydrates, carboxylic acids, esters, lipids, amides, amino acids, and proteins. Introduction to the role of enzymes and vitamins in metabolism, structure and function of nucleic acids, and protein synthesis, reactions of hydrocarbons, alcohols, phenol, ethers, carboxylic acids, esters, properties of lipids, saponification, structures and properties of aspirin and other analgesics, amino acids, peptides and proteins, properties of enzymes.(\*Indicates objectives pertinent to the laboratory portion of the course as well as lecture.)  
Prerequisite(s): CHM 1150 or high school chemistry within the last 5 years  
Lab Fee: \$70.00  
Terms Offered: Fall

### **CHM 1210 General Chemistry I (5)**

Contact hours (7 total): 4 lecture, 3 lab  
Significant figures; fundamental structures of atoms and molecules, introduction to quantum mechanics, atomic orbitals; principles of ionic, covalent and metallic bonding, including Lewis structures, valence bond and molecular orbital theories of bonding; mole concept, stoichiometry, and the laws of composition; acids and bases, oxidation-reduction chemistry, and solutions; thermochemistry; behavior of gases, classification of elements, including periodicity; nuclear chemistry; applications of chemistry in society; molecular modeling; collection, analysis and reporting of data; problem-solving using algebraic methods.(\*Indicates objectives pertinent to the laboratory portion of the course as well as lecture.)  
Prerequisite(s): CHM 1150 with a grade of C or higher or one year of high school chemistry with a grade of C or higher  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher and MTH 1280  
Lab Fee: \$85.00  
Terms Offered: Fall

### **CHM 1220 General Chemistry II (5)**

Contact hours (7 total): 4 lecture, 3 lab  
Intermolecular forces and phase changes; solutions and colligative properties; chemical kinetics; chemical equilibrium; acid-base equilibria; thermodynamics (including entropy and free energy); electrochemistry; descriptive chemistry, including chemical properties and classification of the elements, periodic patterns of reactivity; introduction to organic and biochemistry; applications of chemistry in society; collection, analysis and reporting of data; problem-solving using algebraic methods.(\* Indicates objectives pertinent to the laboratory portion of the course as well as lecture.)  
Prerequisite(s): CHM 1210 with grade of C or higher  
Lab Fee: \$85.00  
Terms Offered: Spring

## (COM) COMMUNICATION

### COM 1110 Interpersonal Communication I (3)

Contact hours (3 total): 3 lecture

An introduction to the principles and theories of interpersonal communication; analyzing, changing, and improving oneself within various relationships. The communication process, listening, perception, verbal and nonverbal communication, emotions, self-concept, power, conflict, gender, and intercultural communication.

Prerequisite(s): ENG 1111

Global Awareness.

Terms Offered: Fall, Spring, Summer

### COM 1120 Public Speaking I (3)

Contact hours (3 total): 3 lecture

An introduction to public speaking processes designed to assist students in communicating effectively in a variety of speaking situations. Examines developing, organizing, delivering, and analyzing public presentations. [Note: Online sections require recording 4 speeches in front of a live audience created by the student with at least 7 adults present for each speech.]

Prerequisite(s): ENG 1111

Terms Offered: Fall, Spring, Summer

### COM 1130 Introduction to Mass Communication (3)

Contact hours (3 total): 3 lecture

History of mass media in our society, specifically radio, newspapers, magazines, television, governmental regulation, public relations, marketing, advertising, and the Internet. Relationships between mass media, other forms of media, their respective audiences, and philosophical and ethical issues.

Prerequisite(s): ENG 1111

Terms Offered: Fall, Spring, Summer

### COM 1150 Introduction to Communication Theory (3)

Contact hours (3 total): 3 lecture

Principles and foundational theories in the study of communication. Examination of various theories that attempt to describe, explain, and/or predict human communication behavior. Specific areas of study include: communication process, listening, conflict, gender, public speaking, mass communication, group communication, and intercultural communication.

Pre/Corequisite(s): ENG 0980

Terms Offered: Fall

### COM 1170 Small Group Communication (3)

Contact hours (3 total): 3 lecture

An introduction to the basic terms, principles, and theories of small group communication, examining multicultural leadership, roles, goal achievement, conflict, decision making, and problem solving. Development of effective group decision making, leadership skills, emphasizing methods of expressing oneself, and understanding others.

Prerequisite(s): ENG 1111

Global Awareness.

Terms Offered: Fall

### COM 2240 Organizational Communication (3)

Contact hours (3 total): 3 lecture

An introduction to organizational communication research and theory with emphasis on communication processes to create a productive work environment, quality communication, and adaptation to an evolving workplace. An analysis of methods organizations use to sustain, how they communicate with their respective audiences, and assess principles for best organizational communication by analyzing successful historical practices and cutting edge beliefs which are driving organizations today.

Prerequisite(s): ENG 1111 and COM 1150

Global Awareness.

Terms Offered: Spring

### COM 2700 Communication Internship (3)

Planned, structured, work experience in a professional setting applying a variety of classroom theory and acquiring new skills for a career in communication. May earn between 1-3 credit hours. Participate at the internship placement for a minimum of 10 hours per week per co-op credit earned.

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

## (COR) CORRECTIONS

### COR 1100 Introduction to Corrections (3)

Contact hours (3 total): 3 lecture

Explanation of history, evolution, and components of correctional systems. Identify components of the correctional systems. Current practices and present-day issues in Corrections. All students looking to enroll in CRJ 1100, Introduction to Criminal Justice or COR 1100, Introduction to Corrections, must meet with the Program Coordinator, Wendy Holt, before registering for these classes.

Prerequisite(s): ENG 0980 or ENG 1111

Instructor Permission Required.

Terms Offered: Fall, Spring

### COR 1105 Probation and Parole (3)

Contact hours (3 total): 3 lecture

History and philosophy of probation, aftercare, and other community programs for juvenile and adult offenders; function and philosophy of parole, current laws, and case studies.

Pre/Corequisite(s): ENG 1111 and COR 1100

Terms Offered: Fall, Spring

### COR 1130 Adult/Juvenile Corrections (3)

Contact hours (3 total): 3 lecture

Facilities, programs, and procedures for detention and incarceration.

Pre/Corequisite(s): ENG 1111 and COR 1100

Terms Offered: Fall, Spring

### COR 2285 Corrections Practicum (3)

Contact hours (2 total): 2 lecture

Field service training (day-time hours). Educational experience through appropriate observation and work assignment in jail and adult correction facilities. 2 hours of lecture/discussion and 7 hours of practicum per week. 105 hours of practicum per semester.

Prerequisite(s): ENG 1112 and COR 1100

Terms Offered: Fall, Spring, Summer

# **(CRJ) CRIMINAL JUSTICE**

## **CRJ 1100 Introduction to Criminal Justice (3)**

Contact hours (3 total): 3 lecture

Overview of the criminal justice system's history, development, and evolution, including subsystems of police, courts, and corrections. All students looking to enroll in CRJ 1100, Introduction to Criminal Justice or COR 1100, Introduction to Corrections, must meet with the Program Coordinator, Wendy Holt, before registering for these classes.

Prerequisite(s): ENG 0980 or ENG 1111

Instructor Permission Required.

Terms Offered: Fall, Spring

## **CRJ 1115 Victimology (3)**

Contact hours (3 total): 3 lecture

Explores victimization's impact upon victims, criminals, criminal justice entities, and the community. Review theories and best practices and identify resources and rights afforded to victim.

Prerequisite(s): ENG 0980 or ENG 1111

Corequisite(s): CRJ 1100

Terms Offered: Fall, Spring

## **CRJ 1120 Juvenile Procedures (3)**

Contact hours (3 total): 3 lecture

Examination of the juvenile justice system's parts, subcultures; and the causative factors, prevention, and treatment of juvenile delinquency.

Prerequisite(s): ENG 0980 or ENG 1111

Corequisite(s): CRJ 1100 and COR 1100

Terms Offered: Fall, Spring, Summer

## **CRJ 1123 Patrol Operations (3)**

Contact hours (3 total): 3 lecture

Comprehensive study of police patrol operations, including vehicle patrol techniques, foot patrol, crimes in progress, prowler calls, building searches, stops and approaches, and traffic crash investigation.

Pre/Corequisite(s): ENG 1111

Corequisite(s): CRJ 1100

Terms Offered: Fall, Spring

## **CRJ 1283 Basic Law Enforcement I (8)**

Contact hours (22 total): 1 lecture, 21 lab

Law enforcement skills and techniques to fulfill partial requirements for peace officer training certification as required by the Attorney General's office and the Ohio Peace Officer's Training Council (OPOTC).

Prerequisite(s): High school diploma or GED and ENG 0980 or ENG 1111

Instructor Permission Required.

Lab Fee: \$1128.00

Terms Offered: Spring, Summer

## **CRJ 1284 Basic Law Enforcement II (8)**

Contact hours (22 total): 1 lecture, 21 lab

Law enforcement skills and techniques to fulfill partial requirements for peace officer training certification as required by the Attorney General's Office and the Ohio Peace Officer's Training Council (OPOTC).

Prerequisite(s): CRJ 1283

Instructor Permission Required.

Lab Fee: \$1128.00

Terms Offered: Spring, Summer

## **CRJ 2201 Police Administration (3)**

Contact hours (3 total): 3 lecture

Examination of administrative design, including personnel selection, training, advancement, discipline, and utilization of resources.

Prerequisite(s): CRJ 1100

Pre/Corequisite(s): ENG 1111

Terms Offered: Fall, Spring

## **CRJ 2216 Community Relations (3)**

Contact hours (3 total): 3 lecture

Principles of community policing including youth-focused activities, community-based crime prevention, reorientation of patrol, police/public accountability, and decentralizing police decision making.

Prerequisite(s): CRJ 1100

Pre/Corequisite(s): ENG 1111

Terms Offered: Fall, Spring, Summer

## **CRJ 2225 Forensic Science (4)**

Contact hours (4 total): 4 lecture

The search for, recognition, and preservation of physical evidence found at crime scenes.

Prerequisite(s): CRJ 1100 and ENG 1111

Pre/Corequisite(s): none

Lab Fee: \$75.00

Terms Offered: Fall, Spring

## **CRJ 2228 Criminal Investigation (3)**

Contact hours (3 total): 3 lecture

Reconstruction of the sequences of a criminal act, including searching, preserving, and evaluating physical evidence including interviewing witnesses and interrogating suspects.

Prerequisite(s): CRJ 1100

Pre/Corequisite(s): ENG 1111

Corequisite(s): none

Terms Offered: Fall, Spring, Summer

## **CRJ 2235 Social Justice (3)**

Contact hours (3 total): 3 lecture

Exploration of job stresses and the social value and ethics of the criminal justice process.

Prerequisite(s): CRJ 1100

Pre/Corequisite(s): ENG 1112

Terms Offered: Fall, Spring, Summer

## **CRJ 2240 Criminal Law (3)**

Contact hours (3 total): 3 lecture

Criminal procedures, criminal law, common defense, and prosecutorial processes.

Prerequisite(s): CRJ 1100

Pre/Corequisite(s): ENG 1112

Terms Offered: Fall, Spring, Summer

## **CRJ 2250 Community Resources (3)**

Contact hours (2 total): 2 lecture

Exploration of community resources to individuals involved in the criminal justice system, volunteer hours at a community agency, team teaching.

Prerequisite(s): CRJ 1100 or COR 1100 and ENG 1111

Pre/Corequisite(s): ENG 1112

Terms Offered: Fall, Summer

### **CRJ 2280 Practicum (3)**

Contact hours (2 total): 2 lecture  
Supervised work experience in law enforcement agencies, 105 hours of practicum documentation during the semester. Criminal background investigation required. Students with felony or domestic convictions cannot be enrolled in this course.  
Prerequisite(s): CRJ 1100 and ENG 1112  
Pre/Corequisite(s): none  
Instructor Permission Required.  
Terms Offered: Fall, Spring, Summer

## **(CSD) COMPUTER SOFTWARE DEVELOPMENT**

### **CSD 1300 Database Management (2)**

Contact hours (3 total): 1 lecture, 2 lab  
Concepts of database management. Relational databases, database design, normalization. Students must take both CSD 1300 and CSD 1310 to replace the discontinued course CSD 1400.  
Prerequisite(s): ENG 0980 with a grade of C or higher, MTH 0500 with a grade of C or higher and ITS 0700, ITS 0710, and ITS 1105  
Terms Offered: Fall, Spring, Summer

### **CSD 1310 SQL I (2)**

Contact hours (3 total): 1 lecture, 2 lab  
Introduction to SQL (Structured Query Language). Create and update tables in a relational database. Use queries to retrieve information from tables. Students must take both CSD 1300 and CSD 1310 to replace the discontinued course CSD 1400. A Windows computer must be used to complete the homework.  
Prerequisite(s): ENG 0980 with a grade of C or higher, MTH 0500 with a grade of C or higher and ITS 0700, ITS 0710, and ITS 1105  
Terms Offered: Fall, Spring, Summer

### **CSD 1510 Programming Fundamentals with Python (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Fundamental programming constructs and concepts. Designed for students with little or no programming experience. Study of variables, constants, looping, strings, flowcharting basics, programming logic, and data validation techniques. This course replaces CSD 1500.  
Prerequisite(s): ENG 0980 with a grade of C or higher and MTH 0500 with a grade of C or higher and ITS 0700 and ITS 0710  
Lab Fee: \$10.00  
Terms Offered: Fall, Spring, Summer

### **CSD 1600 JavaScript and jQuery (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Use JavaScript and jQuery to create interactive web sites. This course replaces CSD 2200.  
Prerequisite(s): CSD 1510 and ITS 1500  
Lab Fee: \$30.00  
Terms Offered: Fall, Spring

### **CSD 2100 Systems Analysis and Design (3)**

Contact hours (4 total): 2 lecture, 2 lab  
A structured approach to the analysis and design of computer-based information systems.  
Prerequisite(s): CSD 1510 and MTH 0750 with a grade of C or higher  
Pre/Corequisite(s): ENG 2211 and ITS 1105  
Terms Offered: Fall

### **CSD 2310 SQL II (2)**

Contact hours (3 total): 1 lecture, 2 lab  
Use SQL (Structured Query Language) to manipulate tables and table data in a relational database. Retrieve data from multiple tables. Develop stored programs and applications. Perform database optimization.  
Prerequisite(s): CSD 1300 with a grade of C or higher and CSD 1310 with a grade of C or higher and CSD 1510 with a grade of C or higher  
Terms Offered: Fall

### **CSD 2521 Java Programming I (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Programming concepts and techniques including input/output, arithmetic and logic operations, looping, file handling, report generation, data types, and structures. Practical applications written, entered, tested, and debugged using principles of the Java programming language. Introduction of appropriate tools to aid in program development.  
Prerequisite(s): CSD 1510 and MTH 0750 with a grade of C or higher  
Terms Offered: Fall

### **CSD 2522 Java Programming II (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Advanced concepts of computer programming. Use of data structures and tools that facilitate programming.  
Prerequisite(s): CSD 2521  
Terms Offered: Spring

### **CSD 2541 C++ Programming (3)**

Contact hours (4 total): 2 lecture, 2 lab  
C++ program structure, language, syntax, and implementation details. Object-oriented programming language concepts.  
Prerequisite(s): CSD 1510 and MTH 0750 with a grade of C or higher  
Terms Offered: Spring

### **CSD 2800 Advanced Topics (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Integration of programming, database, and web design. Project analysis, design, and solution implementation. Writing a final report. Presentation preparation and delivery. Weekly class attendance is required.  
Prerequisite(s): CSD 1300, CSD 1310, CSD 2521, ENG 1111, ITS 1105, and ITS 1500  
Pre/Corequisite(s): COM 1120  
Lab Fee: \$30.00  
Terms Offered: Spring

## **(CSE) CYBERSECURITY**

### **CSE 1110 Introduction to Cybersecurity (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Internet security basics, hackers, spyware, phishing, spam, zombies, Trojan horses, worms, viruses, wi-fi security, denial-of-service, web-blocking, firewalls, and proxy servers. Installation and configuration of security tools and utilities. Use of Windows PC required.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Lab Fee: \$75.00  
Terms Offered: Spring, Summer



### **CSE 1120 Cybersecurity - Security + (3)**

Contact hours (4 total): 2 lecture, 2 lab

Security baselines, network infrastructure security, web security, cryptography, operations security, and security management. CompTIA Security+ certification objectives. Use of Windows PC required.

Prerequisite(s): CSE 1110

Lab Fee: \$75.00

Terms Offered: Spring, Summer

### **CSE 2261 Certified Ethical Hacking (3)**

Contact hours (4 total): 2 lecture, 2 lab

Identification and analysis of vulnerabilities and weaknesses of computer systems. Testing of an organization's cybersecurity to help minimize the risk of malicious attacks. Includes the EC-Council Certified Ethical Hacker (CEH) Certification objectives. Use of Windows PC required.

Prerequisite(s): CSE 1120

Lab Fee: \$75.00

Terms Offered: Fall

### **CSE 2262 Cybersecurity Defense Analysis (3)**

Contact hours (4 total): 2 lecture, 2 lab

Tools and tactics to manage cybersecurity risks, detection and analysis of malicious activity, evaluation of an organization's security, collection and analysis of cybersecurity intelligence, and response to advanced persistent threats (APTs) and other attacks that threaten an organization's security. Includes the CompTIA CySA+ Certification objectives. Use of Windows PC required.

Prerequisite(s): CSE 2261

Lab Fee: \$75.00

Terms Offered: Fall

### **CSE 2902 Special Topics (2)**

Contact hours (2 total): 2 lecture

Overview of computer security and ethical hacking techniques. Discussion of perimeter defenses, escalation of privileges, intrusion detection, policy creation, social engineering, open source intelligence, incident handling, and log interpretation. Use of Windows PC required.

Instructor Permission Required.

Terms Offered: Summer

## **(DMS) DIAGNOSTIC MEDICAL SONOGRAPHY**

### **DMS 1110 Principles of Sonography (3)**

Contact hours (3 total): 3 lecture

Introduction to the profession of Diagnostic Medical Sonography and clinical aspects of the program. History of ultrasound, scope of practice, professional code of ethics, acoustic terminology, physician and patient interaction, and equipment operation. Basics of scanning and exam protocols.

Prerequisite(s): (Acceptance into the DMS Program)

Instructor Permission Required.

Other Fee: \$50.00

Terms Offered: Fall

### **DMS 1120 Abdominal Sonography I (3)**

Contact hours (5 total): 2 lecture, 3 lab

Principles of medical sonography scanning procedures and ultrasonic characteristics of the various abdominal organs. Superficial organs, thyroid, and male reproductive organs. Pediatric exams and musculoskeletal studies.

Prerequisite(s): (Acceptance into the DMS program)

Pre/Corequisite(s): BIO 2122

Instructor Permission Required.

Lab Fee: \$50.00

Terms Offered: Fall

### **DMS 1130 Obstetrical and Gynecological Sonography (3)**

Contact hours (5 total): 2 lecture, 3 lab

General principles of medical sonography and scanning procedures and ultrasonic characteristics of the female pelvis and obstetrics including first, second, and third trimester pregnancy.

Prerequisite(s): (Acceptance into the DMS Program) and BIO 2122

Lab Fee: \$50.00

Terms Offered: Spring

### **DMS 1140 Clinical Sonography I (4)**

Contact hours (1 total): 1 lecture

Initial scanning experience in the clinical setting.

Application of learned concepts and techniques related to sonographic imaging under close supervision of qualified sonographers. Directed reflection on clinical experience, professional development, clinical correlation, current issues, ethical issues, and other miscellaneous topics in sonography. 360 clinical hours.

Prerequisite(s): DMS 1110 and DMS 1120

Pre/Corequisite(s): DMS 1130

Lab Fee: \$80.00

Student Liability Fee: \$20.00

Other Fee: \$100.00

Terms Offered: Spring

### **DMS 1150 Vascular Sonography (3)**

Contact hours (4 total): 2 lecture, 2 lab

Principles of medical sonography scanning procedures and ultrasonic characteristics of the vasculature in the human body. Evaluation of pathology and uses of diagnostic medical sonography and its application in the diagnosis and treatment of diseases relating to the vascular system.

Prerequisite(s): (Acceptance into the DMS program)

Corequisite(s): DMS 1110

Lab Fee: \$50.00

Terms Offered: Spring

### **DMS 2210 Physics & Instrumentation I (3)**

Contact hours (3 total): 3 lecture

Sonographic physics and instrumentation covering basic principles of medical sonography. Acoustic variables, the interaction of sound with tissue, transducers, and instrumentation of machine controls.

Prerequisite(s): PHY 1100

Pre/Corequisite(s): DMS 1140

Terms Offered: Spring



### **DMS 2220 Clinical Sonography II (4)**

Contact hours (1 total): 1 lecture  
Skills and techniques related to sonographic imaging under close supervision of qualified sonographers. Directed reflection on clinical experience, professional development, clinical correlation, current issues, ethical issues, and other topics in sonography. 350 clinical hours.  
Prerequisite(s): DMS 1140  
Lab Fee: \$80.00  
Student Liability Fee: \$20.00  
Terms Offered: Summer

### **DMS 2241 Abdominal Sonography II (2)**

Contact hours (2 total): 2 lecture  
Uses of diagnostic medical sonography in the evaluation of pathologies of the abdomen, superficial structures, male reproductive system, musculoskeletal system, and pediatric patients.  
Prerequisite(s): DMS 1120  
Terms Offered: Spring

### **DMS 2250 Obstetrical and Gynecological Sonography II (2)**

Contact hours (2 total): 2 lecture  
Diagnostic medical sonography in the evaluation of pathologies of the female pelvis and obstetrics including first, second, and third trimester.  
Prerequisite(s): DMS 1130  
Terms Offered: Fall

### **DMS 2261 Sonography Registry Review (3)**

Contact hours (3 total): 3 lecture  
Preparation for the ultrasound registry examinations. Instructor Permission Required.  
Terms Offered: Fall

### **DMS 2270 Clinical Sonography III (4)**

Contact hours (1 total): 1 lecture  
Independent clinical experience under the supervision of qualified sonographers. Directed reflection on clinical experience, professional development, clinical correlation, current issues, ethical issues, and other topics in sonography. 312 clinical hours.  
Prerequisite(s): DMS 2210, DMS 2220, and DMS 2241  
Pre/Corequisite(s): DMS 2250  
Lab Fee: \$80.00  
Student Liability Fee: \$20.00  
Terms Offered: Fall

### **DMS 2291 Sonography Capstone (1)**

Contact hours (1 total): 1 lecture  
Reflection on the program and sonography education. Preparation for registry exams.  
Prerequisite(s): DMS 2220 and DMS 2241  
Pre/Corequisite(s): DMS 2250  
Terms Offered: Fall

## **(DSL) DIESEL TECHNOLOGIES**

### **DSL 1100 Hydraulic Theory and Operation (2)**

Contact hours (4 total): 1 lecture, 3 lab  
Fundamental theory, application, and operation of mobile hydraulic systems. Hydraulic pumps, valves, control systems, cylinders, and accessories.  
Lab Fee: \$100.00  
Terms Offered: Summer

### **DSL 1200 Fundamentals of Engines (3)**

Contact hours (7 total): 1 lecture, 6 lab  
Internal combustion gasoline and diesel engines. Construction of the internal combustion engine, with primary focus on the individual systems. Engine maintenance and service, as well as associated tools, equipment, and procedures.  
Lab Fee: \$100.00  
Certification Fee: \$35.00  
Terms Offered: Fall, Spring

### **DSL 1300 Preventative Maintenance (2)**

Contact hours (4 total): 1 lecture, 3 lab  
Preventative maintenance (PM) and standard service procedures of a heavy duty truck. Familiarization with the heavy duty truck market and equipment, shop and material safety, standard shop equipment, basic hand tool usage and care, usage and care of precision measuring instruments, and shop safety precautions. Individual truck systems, their service and preventative maintenance procedures.  
Lab Fee: \$100.00  
Terms Offered: Fall, Spring

### **DSL 1500 Heavy Truck Drive Trains (3)**

Contact hours (5 total): 1 lecture, 4 lab  
Examine construction, operation, application, maintenance, and repair of class 6, 7, and 8 truck drive lines. Multi-speed manual transmissions, single and dual reduction differential assemblies, drive shafts, and clutches. Manual shift and auto-shift transmission models.  
Lab Fee: \$100.00  
Terms Offered: Fall, Spring

### **DSL 1550 Truck Steering and Suspension (2)**

Contact hours (4 total): 1 lecture, 3 lab  
Highway truck steering systems, suspension systems, and vehicle chassis. Construction, operation, application, service, maintenance, and diagnostics of systems. Laws and regulations governing these areas.  
Lab Fee: \$100.00  
Terms Offered: Fall, Spring

### **DSL 1600 Basic Electrical (3)**

Contact hours (5 total): 2 lecture, 3 lab  
Principles, operation, and applications of heavy duty truck electrical systems. Testing and diagnostics on batteries, starters, and alternators. Electrical circuit troubleshooting.  
Lab Fee: \$100.00  
Terms Offered: Fall, Spring, Summer

### **DSL 1650 Truck Brake Systems (3)**

Contact hours (7 total): 1 lecture, 6 lab  
Medium and heavy duty truck brake systems. Brake system construction, operation, maintenance, and troubleshooting. Anti-lock braking system (ABS) and anti-snaking system (ATC) technology and troubleshooting.  
Prerequisite(s): DSL 1100 and DSL 1300  
Lab Fee: \$100.00  
Terms Offered: Summer

### **DSL 2300 Advanced Electrical / Electronics (3)**

Contact hours (5 total): 2 lecture, 3 lab  
Electrical/electronic systems except power train systems.  
Heavy duty truck electrical/electronic accessory systems.  
Operation of individual systems, diagnostics, and troubleshooting.  
Prerequisite(s): DSL 1600  
Lab Fee: \$100.00  
Certification Fee: \$35.00  
Terms Offered: Fall, Spring

### **DSL 2500 Heavy Truck Automatic Transmissions (2)**

Contact hours (4 total): 1 lecture, 3 lab  
Medium and heavy duty truck automatic transmissions and torque converters. Planetary gearing, power flow, hydro-mechanical operation, electronic hydro-mechanical operation, terminology, service, testing, and troubleshooting. On-vehicle testing and troubleshooting.  
Prerequisite(s): DSL 1500  
Lab Fee: \$100.00  
Terms Offered: Fall, Spring

### **DSL 2600 Heavy Truck HVAC (2)**

Contact hours (3 total): 1.5 lecture, 1.5 lab  
Heavy duty truck heating, venting, and air conditioning systems (HVAC); operation, maintenance, service, and diagnostics. Air conditioning certifications through the Mobile Air Conditioning Society (MACS), the Institute of Mobile Air Conditioning (IMAC) or the National Institute of Automotive Service Excellence (ASE).  
Lab Fee: \$100.00  
Terms Offered: Summer

## **(EBE) EXPERIENCE BASED EDUCATION**

### **EBE 1000 Employability Skills (1)**

Contact hours (1 total): 1 lecture  
Life, career, and educational goals; resume and cover letter; research organization; interviewing skills, discussion of professional image; follow-up letter; co-op/internship processes.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall, Spring

### **EBE 1100 Prior Learning Portfolio Development (2)**

Contact hours (2 total): 2 lecture  
Development of a portfolio of prior learning experiences to be assessed for credit for college courses. Overview of experiential learning and production of a work/life experience record, goals paper, learning statements, documentation of experiential learning, and a portfolio suitable for assessment. Students enrolled in or having successfully completed EBE 1100 must pay a \$60 assessment fee per course-equivalent portfolio.  
Prerequisite(s): Approval of coordinator. This course is required if seeking more than 4 hours of experiential credit.  
Instructor Permission Required.  
Other Fee: \$60.00  
Terms Offered: Fall, Spring

### **EBE 2500 Co-op/Internship Seminar (1)**

Contact hours (1 total): 1 lecture  
Relate classroom theory and practice to the work environment. Discuss work place experiences. Develop possible solutions to work place issues. Taken concurrently with an internship or co-op experience.  
Corequisite(s): EBE 2701, EBE 2702, EBE 2703, EBE 2704, EBE 2801, EBE 2802, EBE 2803, or EBE 2804  
Instructor Permission Required.  
Terms Offered: Fall, Spring, Summer

### **EBE 2601 Internship - Project Based (1)**

Planned, structured, work experience in a professional work setting. Project-based approach to assisting an organization in accomplishing a goal or goals. Apply classroom theory and acquire new knowledge and skills. Learn about, react to, and write about internship organization and internship experience. A minimum of 15 hours (1 hour per week for 15-week term) of on-site, supervised work in addition to a minimum of 2 hours per week of off-site activities required to complete the project.  
Prerequisite(s): 6 hours of oral and written communication courses, 15 hours of course work relevant to the planned internship experience, Approved placement, Instructor permission, and EBE 1000  
Instructor Permission Required.  
Terms Offered: Fall, Spring, Summer

### **EBE 2602 Internship - Project Based (2)**

Planned, structured, work experience in a professional work setting. Project-based approach to assisting an organization in accomplishing a goal or goals. Apply classroom theory and acquire new knowledge and skills. Learn about, react to, and write about internship organization and internship experience. A minimum of 30 hours (2 hours per week for 15-week term) of on-site, supervised work in addition to a minimum of 4 hours per week of off-site activities required to complete the project.  
Prerequisite(s): 6 hours of oral and written communication courses, 15 hours of course work relevant to the planned internship experience, Approved placement, Instructor permission, and EBE 1000  
Terms Offered: Fall, Spring, Summer

### **EBE 2603 Internship - Project Based (3)**

Planned, structured, work experience in a professional work setting. Project-based approach to assisting an organization in accomplishing a goal or goals. Apply classroom theory and acquire new knowledge and skills. Learn about, react to, and write about internship organization and internship experience. A minimum of 45 hours (3 hours per week for 15-week term) of on-site, supervised work in addition to a minimum of 6 hours per week of off-site activities required to complete the project.  
Prerequisite(s): 6 hours of oral and written communication courses, 15 hours of course work relevant to the planned internship experience, Approved placement, Instructor permission, and EBE 1000  
Instructor Permission Required.  
Terms Offered: Fall, Spring, Summer

### **EBE 2701 Co-op Education I (1)**

Relating academic studies to the world of work, establishing learning outcomes, preparing related reports. Workplace learning of a minimum of 150 documented hours (10 hours per week for 15-week term).

Prerequisite(s): EBE 1000 or AGR 1100 and Approved co-op placement

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **EBE 2702 Co-op Education I (2)**

Relating academic studies to the world of work, establishing learning outcomes, preparing related reports. Workplace learning of a minimum of 300 documented hours (20 hours per week for 15-week term).

Prerequisite(s): EBE 1000 or AGR 1100 and Approved co-op placement

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **EBE 2703 Co-op Education I (3)**

Relating academic studies to the world of work, establishing learning outcomes, preparing related reports. Workplace learning of a minimum of 450 documented hours (30 hours per week for 15-week term).

Prerequisite(s): EBE 1000 or AGR 1100 and Approved co-op placement

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **EBE 2704 Co-op Education I (4)**

Relating academic studies to the world of work, establishing learning outcomes, preparing related reports. Workplace learning of a minimum of 600 documented hours (40 hours per week for 15-week term).

Prerequisite(s): EBE 1000 or AGR 1100 and Approved co-op placement

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **EBE 2801 Co-op Education II (1)**

Continuation of valuable work experience. In addition to requirements of Co-op Education I, a special project is required based on the technology. Workplace learning of a minimum of 150 documented hours (10 hours per week for 15-week term).

Prerequisite(s): EBE 1000 or AGR 1100 and Approved co-op placement

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **EBE 2802 Co-op Education II (2)**

Continuation of valuable work experience. In addition to requirements of Co-op Education I, a special project is required based on the technology. Workplace learning of a minimum of 300 documented hours (20 hours per week for 15-week term).

Prerequisite(s): EBE 1000 or AGR 1100 and Approved co-op placement

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **EBE 2803 Co-op Education II (3)**

Continuation of valuable work experience. In addition to requirements of Co-op Education I, a special project is required based on the technology. Workplace learning of a minimum of 450 documented hours (30 hours per week for 15-week term).

Prerequisite(s): EBE 1000 or AGR 1100 and Approved co-op placement

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **EBE 2804 Co-op Education II (4)**

Continuation of valuable work experience. In addition to requirements of Co-op Education I, a special project is required based on the technology. Workplace learning of a minimum of 600 documented hours (40 hours per week for 15-week term).

Prerequisite(s): EBE 1000 or AGR 1100, and approved co-op placement

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

## **(ECE) EARLY CHILDHOOD EDUCATION**

### **ECE 1100 Socioemotional Development in Early Childhood (3)**

Contact hours (3 total): 3 lecture

Social and emotional development birth through age eight. Foundational theories of social-emotional development, relational-based/attachment theories, classic and contemporary discipline systems. Positive child guidance and group management techniques to foster self-control and self-discipline. Aggressive behavior intervention methodologies. Emphasis on community-based environment, anti-bias curriculum, and peace instruction to foster prosocial behaviors in young children. Observations required.

Prerequisite(s): ENG 0850 (ENG 0850 with a C or higher.)

Lab Fee: \$35.00

Terms Offered: Fall, Spring

### **ECE 1101 Professional Development for Educators (1)**

Contact hours (1 total): 1 lecture

Overview of basic skills and knowledge necessary for individuals planning a career path in education. Focus on course planning, scheduling, professional communication, academic preparation, and individual learning styles. Criminal background check at approximate cost of \$60 must be obtained prior to course completion.

Prerequisite(s): ENG 0980 or ENG 1111

Pre/Corequisite(s): ECE 1103 and ECE 1100

Terms Offered: Fall, Spring

### **ECE 1103 Early Childhood Development (3)**

Contact hours (3 total): 3 lecture

Focus on applying knowledge of the characteristics and needs of young children prenatal to age eight, to create healthy, respectful, supportive, challenging, and effective learning environments. Multiple and interrelated influences on the development and learning of young children will be examined.

Prerequisite(s): ENG 0980 or ENG 1111

Lab Fee: \$35.00

Student Liability Fee: \$20.00

Terms Offered: Fall

### **ECE 1105 Language and Literacy in Education (3)**

Contact hours (3 total): 3 lecture

Language and literacy development 0-8. Foundational theories and practices enhancing language development, beginning reading and writing skills in young children. Study of children's literature, connecting language, phonemic awareness, and literacy activities to quality picture book titles, classroom use of different genres. Introduction to American Sign Language (ASL) for classroom use. Observations, methods, practical skills in Language Arts instructional methods and teacher-made materials.

Prerequisite(s): ENG 0850 (ENG 0850 grade of C or higher)

Lab Fee: \$35.00

Terms Offered: Fall

### **ECE 1106 Health, Safety and Nutrition (2)**

Contact hours (2 total): 2 lecture

Examination and discussion of content and issues related to the health, safety, and nutrition of young children aged birth through eleven. Explore safe learning environments, healthy nutrition, and positive interactions that support growth and development of young children. Ways to engage the family in supporting these practices including use of state licensing rules and trainings.

Prerequisite(s): ENG 0980 or ENG 1111

Lab Fee: \$15.00

Student Liability Fee: \$25.00

Terms Offered: Spring

### **ECE 1108 Creative and Motor Development in Early Childhood (3)**

Contact hours (3 total): 3 lecture

Creative and motor development birth through eight. Foundational learning theories in physical and creative development through play, visual art, music, and movement. Participation in activities of art, drama, music, and movement to enhance creative expression and development of critical thinking, processing, and problem-solving skills of the young child. Observation and resource portfolio.

Prerequisite(s): ENG 0850 (ENG 0850 with a C or higher)

Pre/Corequisite(s): none

Lab Fee: \$40.00

Terms Offered: Fall

### **ECE 1112 Cognitive Development in Early Childhood (3)**

Contact hours (3 total): 3 lecture

Cognitive development birth through eight. Brain development, foundational cognitive development learning theories, and Ohio Department of Education (ODE) Early Learning Content Standards. Best practices in enhancing processing skills, problem solving and critical thinking in curriculum content areas math, science, social studies. Planning and implementing small group activities, preparing teacher-made materials for use in advancement of mathematics, science, and social studies skills.

Observations, methods, and instructional strategies/skills.

Prerequisite(s): ENG 1111, ECE 1101, and MTH 0500 with a grade of C or higher

Lab Fee: \$35.00

Terms Offered: Spring

### **ECE 1116 Observation and Assessment in Early Childhood (3)**

Contact hours (3 total): 3 lecture

Observation, documentation, assessment, and interpretation of behaviors in young children. Assessment tools and methodologies for collecting data and decision making.

Pre/Corequisite(s): ECE 1101 and ECE 1103

Lab Fee: \$35.00

Student Liability Fee: \$25.00

Terms Offered: Spring

### **ECE 1200 Infant Toddler Curriculum (2)**

Contact hours (2 total): 2 lecture

Exploration and discussion of high-quality care-giving and developmentally appropriate practices when engaging with infants and toddlers and their families. Importance of quality environments that support development, language and literacy, family engagement

Pre/Corequisite(s): ECE 1103

Lab Fee: \$15.00

Student Liability Fee: \$25.00

Terms Offered: Fall

### **ECE 1201 Child Development Associate Capstone (3)**

Contact hours (3 total): 3 lecture

Examination and discussion of content pertaining to Child Development Associate (CDA) certification. Observation in designated focus area (infant/toddler or preschool). Completion of CDA application and preparation for CDA examination.

Prerequisite(s): ECE 1101

Pre/Corequisite(s): ECE 1103 and ECE 1106

Instructor Permission Required.

Certification Fee: \$480.00

Terms Offered: Fall, Spring

### **ECE 2120 Leadership, Management, Mentoring in Early Childhood Education (3)**

Contact hours (3 total): 3 lecture

Guidelines for leading, staffing, organizing, budgeting, planning, monitoring, and controlling for quality in programs for young children. Examination of leadership styles, teacher development, guiding, and coaching in a variety of settings. Focus on creating culturally responsive and ethical programs through use of anti-bias teaching practices and incorporation of Code of Ethical Conduct in planning and implementation.

Prerequisite(s): ENG 1111 and ECE 1116

Lab Fee: \$25.00

Terms Offered: Spring

### **ECE 2130 Practicum Field I (1)**

Field Experience I, application of theory, planning, and implementing appropriate lessons in all Ohio Department of Education (ODE) Early Learning Content areas, observational and assessment skills, guidance and behavior management skills, professionalism. Completion of all paper work required for entrance into field experience including FBI/BCI fingerprinting, proof of all certifications, personal references, physical exam. 150 hours supervised experiences in approved field site.

Prerequisite(s): ECE 1105, ECE 1112, and ECE 1116

Pre/Corequisite(s): ECE 2100 and ECE 1108

Corequisite(s): ECE 2133

Instructor Permission Required.

Lab Fee: \$30.00

Student Liability Fee: \$20.00

Terms Offered: Fall



### **ECE 2133 Early Education Curriculum and Instruction (3)**

Contact hours (3 total): 3 lecture

Plan, prepare, and implement appropriate curriculum with emphasis on curriculum models, Ohio Department of Education Content standards, goals, three-part objectives, lesson planning, teaching strategies, National Association for Education of Young Children (NAEYC) best practices, observation, documentation, screening, evaluation processes, review of classroom management principles, learning theories, code of conduct for professionalism, and teaching skills. Begin preparation for Praxis Examination.

Prerequisite(s): ECE 1105, ECE 1112, and ECE 1116

Pre/Corequisite(s): ECE 2100 and ECE 1108

Corequisite(s): ECE 2130

Instructor Permission Required.

Lab Fee: \$35.00

Terms Offered: Fall

### **ECE 2135 Practicum Field II (2)**

Field Experience II, application of theory, child development, and skills in planning and implementing appropriate lessons, units of study. Lead day planning for environment, support staff, managing transitions, guiding and managing both small and large group settings. Professional behaviors working with mentor teacher, support teachers, staff, and parents. Completion of observational tools, including case studies, assessment tools, and documentation of learning expected. 210 hours supervised experiences and final evaluation by mentor teacher and Clark State instructor. Final capstone oral presentation and learning summaries of program goals and field experience.

Prerequisite(s): ECE 2130 and ECE 2133

Corequisite(s): ECE 2137

Instructor Permission Required.

Lab Fee: \$30.00

Student Liability Fee: \$20.00

Terms Offered: Spring

### **ECE 2137 Seminar II (2)**

Contact hours (2 total): 2 lecture

Preparation for field experience II, planning appropriate lessons in all content areas, including creative experiences, use of Ohio Department of Education (ODE) Early Learning Content Standards, planning for environment at field site, observations, assessments. Peer and teacher evaluations, small and large group planning, ten lead days, planning for routine, guidance, support staff, and transitions. Analysis of experiences gained in field, preparation of capstone portfolio and final oral evaluation. Completion of all paper work, documentation needed for entering field site. Praxis examination practice.

Prerequisite(s): ECE 2130 and ECE 2133

Corequisite(s): ECE 2135

Instructor Permission Required.

Lab Fee: \$30.00

Terms Offered: Spring

### **ECE 2138 Curriculum and Practicum I (4)**

Field Experience 1. Application of theory, planning and implementing appropriate lessons in all Ohio Department of Education (ODE) Early Learning Content standards and National Association for Education of Young Children (NAEYC) best practices. Review of classroom management principles, observational and assessment skills, guidance and behavior management skills, professionalism. Completion of all paper work required for entrance into field experience including FBI/BCI fingerprinting, proof of all certifications, personal references, physical exam. 150 hours supervised experience in approved field site. Completion of observational tools; case studies, assessment tools, and documentation of learning. Preparation for Praxis Examination.

Prerequisite(s): ECE 1100, ECE 1105, ECE 1112, and ECE 1116

Pre/Corequisite(s): ECE 1108

Instructor Permission Required.

Lab Fee: \$65.00

Student Liability Fee: \$20.00

Terms Offered: Fall

### **ECE 2139 Curriculum and Practicum II (4)**

Field Experience 2. Planning appropriate lessons in all content areas, including creative experiences, use of Ohio Department of Education (ODE) Early Learning Content Standards, planning for environment at field site, observations, assessments. Peer and teacher evaluations, small and large group planning, lead days, planning daily routine, guidance, support staff, and transitions. Analysis of experience gained in field, preparation of capstone portfolio and final oral evaluation. 150 hours supervised experience and final evaluation by mentor teacher and Clark State instructor. Completion of all paper work and documentation needed for field site. Final capstone. Praxis examination practice.

Prerequisite(s): ECE 2138

Instructor Permission Required.

Lab Fee: \$60.00

Student Liability Fee: \$20.00

Terms Offered: Spring

## **(ECO) ECONOMICS**

### **ECO 1100 General Economics (3)**

Contact hours (3 total): 3 lecture

Introduction to basic economic concepts and topics such as resource allocation, costs, supply, demand, public goods, capitalism, market failures, gross domestic product, unemployment, population, inflation, unemployment, taxation, money creation, monetary policy, international trade, and other policy issues. Serves as General Education elective for students whose programs do not require ECO 2210 and ECO 2220.

Prerequisite(s): ENG 1111

Terms Offered: Fall, Spring, Summer

### **ECO 2210 Principles of Macroeconomics (3)**

Contact hours (3 total): 3 lecture

Fundamentals of economics from a macro perspective including gross domestic product (GDP), level of employment, inflation, monetary and fiscal policies, trends and cycles.

Prerequisite(s): ENG 1111

Terms Offered: Fall, Spring, Summer



### **ECO 2220 Principles of Microeconomics (3)**

Contact hours (3 total): 3 lecture

Fundamentals of economics from a micro perspective including elasticity, market efficiency, government intervention, consumer choice theory, production cost, market structures, market pricing, externalities, imperfect information, and public goods.

Prerequisite(s): ENG 1111

Terms Offered: Fall, Spring, Summer

## **(EDU) EDUCATION**

### **EDU 1110 Introduction to Education (3)**

Contact hours (3 total): 3 lecture

Purposes, organizations and outcomes of schooling grounded in social foundations of education. Critical inquiry into teaching as a profession, licensure requirements, teacher's legal rights and responsibilities, and accountability of public schools. Examine historical and philosophical foundations, demographic factors, and issues of culturally responsive teaching practice. Requires (4) hours of observation and completion of interviews.

Prerequisite(s): ENG 0980 or ENG 1111

Student Liability Fee: \$25.00

Lab Fee: \$20.00

Terms Offered: Fall, Spring

### **EDU 2110 Family, Community, Schools (3)**

Contact hours (3 total): 3 lecture

Effect of family and community environment on the learner. Effect of culture, disability, and socioeconomic status on collaboration and interaction with families. Strategies to promote effective collaboration with emphasis on listening, communication, confidentiality, problem solving, stress management, ethics, and role as a team member. Field observation and participation.

Prerequisite(s): ENG 1111

Pre/Corequisite(s): ENG 1112 and EDU 1110

Lab Fee: \$35.00

Terms Offered: Spring

### **EDU 2217 Individuals with Exceptionalities (3)**

Contact hours (3 total): 3 lecture

Overview of exceptionalities, inclusive & self-contained education programs with an opportunity to observe classroom methods, management and strategies for flexible adaptive planning in educational settings. Topics include learner development and individual learning differences, learning environments, curricular content knowledge, assessment, instructional planning and strategies, professional learning and ethical practice & dispositions, and collaborations with families, schools, and communities.

Prerequisite(s): EDU 1110 and ENG 1111

Pre/Corequisite(s): ENG 1112

Student Liability Fee: \$30.00

Lab Fee: \$20.00

Terms Offered: Spring

## **(EMS) EMERGENCY MEDICAL SERVICES**

### **EMS 1100 EMT Theory & Practice (7)**

Contact hours (10 total): 6 lecture, 4 lab

Meets current standards of the State of Ohio Division of Emergency Medical Services (EMS) for the Emergency Medical Technician (EMT) certification. Students will learn to recognize the nature and seriousness of patient's condition/extent of injuries, how to administer appropriate emergency medical care, and will develop self-confidence, communication skills, and accurate record keeping. Clinical/field observations are included. Embedded with in the course is the CPR course requirement. Students will receive their CPR ecard with successful completion of this portion of the curriculum. Successful students will be eligible to take Ohio's EMT certification testing. (The Summer semester EMT 1100 Theory & Practice is an "Accelerated Course". Some additional evenings will be added to meet the state minimum hour requirements.)

Prerequisite(s): ENG 0980 or ENG 1111

Corequisite(s): Criminal background check

Lab Fee: \$50.00

Other Fees: \$149.00

Student Liability Fee: \$62.00

Certification Fee: \$90.00

Terms Offered: Fall, Spring, Summer

### **EMS 1112 Paramedic Hospital Practice I (1)**

Beginning of the clinical practice in the hospital setting observing and practicing skills evaluated in the college laboratory. Includes emergency department.

Corequisite(s): EMS 1131

Instructor Permission Required.

Student Liability Fee: \$62.00

Other Fee: \$90.00

Terms Offered: Fall

### **EMS 1114 Paramedic Hospital Practice II (1)**

Continuing clinical practice in the hospital setting observing and practicing skills evaluated in the college laboratory. Includes emergency department, intensive care, and operating room rotations.

Prerequisite(s): EMS 1112

Corequisite(s): EMS 1133

Instructor Permission Required.

Terms Offered: Spring

### **EMS 1116 Paramedic Hospital Practice III (1)**

Continuing clinical practice in the hospital setting observing and practicing skills evaluated in the college laboratory. Includes emergency department, intensive care, and operating room rotations.

Prerequisite(s): EMS 1114

Instructor Permission Required.

Terms Offered: Summer

### **EMS 1122 Paramedic Field Practice I (1)**

Beginning level of pre-hospital experience with a paramedic team, observing daily responsibilities of the paramedic, opportunity to go on EMS calls, progressing from observation to participant role with the advanced life-support team.

Corequisite(s): EMS 1131

Instructor Permission Required.

Terms Offered: Fall

**EMS 1124 Paramedic Field Practice II (1)**

Continuation of prehospital experience with a paramedic team, observing the daily responsibilities of the paramedic, giving the student the opportunity to go on EMS calls progressing from an observation role to a participant/leadership role with the Advanced Life Support team.

Prerequisite(s): EMS 1122

Corequisite(s): EMS 1133

Instructor Permission Required.

Terms Offered: Spring

**EMS 1126 Paramedic Field Practice III (1)**

Continuation of prehospital experience with a paramedic team, observing the daily responsibilities of the paramedic, giving the student the opportunity to go on EMS calls progressing from an observation role to a participant/leadership role with the Advanced Life Support team.

Prerequisite(s): EMS 1124

Instructor Permission Required.

Terms Offered: Summer

**EMS 1128 Paramedic Field Practice IV (1)**

Continuation of prehospital experience with a paramedic team, observing the daily responsibilities of the paramedic, giving the student the opportunity to go on EMS calls progressing from an observation role to a participant/leadership role with the Advanced Life Support team.

Prerequisite(s): EMS 1126

Corequisite(s): EMS 1136

Instructor Permission Required.

Student Liability Fee: \$62.00

Terms Offered: Fall

**EMS 1131 Paramedic Theory I (6)**

Contact hours (6 total): 6 lecture

Introduction to emergency medical services advanced life support following EMT Paramedic National Standard Curriculum. Prehospital environment, overview of roles and responsibilities, EMS systems, medical ethical/legal aspects, therapeutic and professional communications, stress management in emergency services, advanced patient assessment, advanced airway management, IV therapy, introduction to respiratory and cardiac emergencies, emergency pharmacology and medication administration.

Prerequisite(s): ENG 0850 with a grade of C or higher, ENG 0900 with a grade of C or higher, MTH 0500 with a grade of C or higher and Ohio Basic EMT Certification, BIO 1105, and MST 1105

Corequisite(s): EMS 1112, EMS 1122, and EMS 1141

Instructor Permission Required.

Other Fee: \$182.50

Terms Offered: Fall

**EMS 1133 Paramedic Theory II (6)**

Contact hours (6 total): 6 lecture

Application of concepts from Paramedic Theory I.

Treatment plans for cardiovascular, neurologic, endocrine, gastroenterologic, renal, urologic, gynecologic, obstetric, and specific neonatal, pediatric, and geriatric disorders, allergies and anaphylaxis, toxic exposure, infectious and communicable diseases, environmentally induced emergencies, behavioral emergencies, trauma, acute deterioration of chronic illness, patients with special challenges, and victims of abuse or assault. Management of emergency scene.

Prerequisite(s): EMS 1131

Corequisite(s): EMS 1114, EMS 1124, and EMS 1143

Instructor Permission Required.

Terms Offered: Spring

**EMS 1134 Paramedic Theory III (3)**

Contact hours (3 total): 3 lecture

Application of concepts from Paramedic Theory I and II. Treatment plans for gynecologic, obstetric, neonatal, pediatric, and geriatric disorders, patients with special challenges, and victims of abuse or assault. Management of emergency scene.

Prerequisite(s): EMS 1133

Corequisite(s): EMS 1116 and EMS 1126

Instructor Permission Required.

Terms Offered: Summer

**EMS 1136 Paramedic Theory IV (3)**

Contact hours (3 total): 3 lecture

Capstone course in the paramedic sequence of study.

Application of concepts from Paramedic Theory I, II, and III. Application of the general concepts of pathophysiology for the assessment and management of emergency patients.

Prerequisite(s): EMS 1134

Corequisite(s): EMS 1128 and EMS 1145

Instructor Permission Required.

Global Awareness.

Lab Fee: \$225.00

Terms Offered: Fall

**EMS 1141 Paramedic Practical Skills Lab I (1.6)**

Contact hours (5 total): 5 lab

Practical skills lab to support course outcomes and learning objectives of EMS 1131.

Corequisite(s): EMS 1131

Instructor Permission Required.

Lab Fee: \$200.00

Terms Offered: Fall

**EMS 1143 Paramedic Practical Skills Lab II (1.7)**

Contact hours (5 total): 5 lab

Practical skills lab to support course outcomes and learning objectives of EMS 1133 and previously learned skills.

Prerequisite(s): EMS 1141

Corequisite(s): EMS 1133

Instructor Permission Required.

Lab Fee: \$200.00

Certification Fee: \$150.00

Terms Offered: Spring

### **EMS 1145 Paramedic Practical Skills Lab III (1.7)**

Contact hours (5 total): 5 lab

Practical skills lab to support course outcomes and learning objectives of EMS 1133 and EMS 1135 and previously learned skills.

Prerequisite(s): EMS 1143

Corequisite(s): none

Instructor Permission Required.

Lab Fee: \$200.00

Terms Offered: Summer

### **EMS 1171 Basic Life Support: CPR (0.5)**

Contact hours (0.5 total): 0.5 lecture

Introduction to respiratory and circulatory emergency in infants, children, and adults. Instruction and treatment methods in community and professional cardiopulmonary resuscitation in accordance with the American Heart Association guidelines.

Lab Fee: \$15.00

Terms Offered: Fall, Spring, Summer

### **EMS 2210 Community Paramedic (4)**

Contact hours (4 total): 4 lecture

Survey of the role and function of the Community Paramedic (CP) as a member of the healthcare team functioning in the community under Ohio's paramedic scope of practice. Role of the CP as an advocate for clients in the community. Mapping of community healthcare services and determining demographic impact on the health of clients. Assessing patient healthcare needs and appraising healthcare conditions. Documentation of patient/client encounters.

Prerequisite(s): (The Community Paramedic student must have at least two years experience as a certified paramedic and submit a program recommendation from a physician board-certified in Emergency Medicine. )

Instructor Permission Required.

Terms Offered: Fall

### **EMS 2288 Paramedic Theory/RNs (5)**

Contact hours (7 total): 4 lecture, 3 lab

A complete paramedic curriculum, pre-hospital environment, preparatory, trauma, burns, medical emergencies, OBG/GYN neonatal, and behavioral emergencies for the registered nurse with experience in the care of critically ill or injured patients. An emphasis is placed on practical knowledge in the college laboratory, hospital clinical setting, and field internship. RNs are given credit for past experience for their nursing education and experience.

Prerequisite(s): RN, ACLS, PHTLS, BTLs, PALS, min 2 yrs critical care, TNCC, Ohio EMT-Basic Certification

Instructor Permission Required.

Lab Fee: \$150.00

Student Liability Fee: \$62.00

Certification Fee: \$150.00

Terms Offered: Spring

### **EMS 2900 Special Topics EMT Theory & Practice I (3.5)**

Contact hours (5 total): 3 lecture, 2 lab

Meets current standards of the State of Ohio Division of Emergency Medical Services (EMS) for the Emergency Medical Technician (EMT). Recognizing nature and seriousness of patient's condition/extent of injuries; administering appropriate emergency medical care, developing self confidence, communication skills, and accurate record keeping. Clinical/field observations. Successful students eligible to take Ohio's EMT certification testing.

Prerequisite(s): ENG 0850 with a grade of C or higher or ENG 0900 with a grade of C or higher, and MTH 0500 with a grade of C or higher

Corequisite(s): Criminal background check and EMS 1171

Instructor Permission Required.

Lab Fee: \$75.00

Terms Offered: Fall, Spring, Summer

### **EMS 2901 Special Topics EMT Theory & Practice II (3.5)**

Contact hours (5 total): 3 lecture, 2 lab

Meets current standards of the State of Ohio Division of Emergency Medical Services (EMS) for the Emergency Medical Technician (EMT). Recognizing nature and seriousness of patient's condition/extent of injuries; administering appropriate emergency medical care, developing self confidence, communication skills, and accurate record keeping. Clinical/field observations. Successful students eligible to take Ohio's EMT certification testing.

Prerequisite(s): ENG 0850 with a grade of C or higher or ENG 0900 with a grade of C or higher, and MTH 0500 with a grade of C or higher and EMS 2900

Corequisite(s): Criminal background check and EMS 1171

Instructor Permission Required.

Lab Fee: \$75.00

Student Liability Fee: \$62.00

Terms Offered: Fall, Spring, Summer

## **(ENG) ENGLISH**

### **ENG 0980 English I Studio (3)**

Contact hours (3 total): 3 lecture

Critical thinking, reading, and writing instruction to support success and completion of English I. Builds reading and writing skills within academic contexts, with attention on research and citation guidelines. Using readings from a variety of genres, students practice and develop reading skills, analyze complex texts, critically respond to ideas and information, and construct written responses that integrate ideas and information with English I course concepts. Institutional credit only.

Prerequisite(s): Appropriate placement

Pre/Corequisite(s): FYE 1101

Corequisite(s): ENG 1111

Terms Offered: Fall, Spring, Summer

### **ENG 1111 English I (3)**

Contact hours (3 total): 3 lecture

Writing and revising process, academic and argumentative essays; literary examples of descriptive, narrative, expository, and persuasive modes; language issues and library skills. Writing intensive, with a minimum course total of 5000 words (20 pages). Primary focus on formal, written work, composed for a variety of audiences.

Prerequisite(s): Appropriate Placement

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring, Summer

### **ENG 1112 English II (3)**

Contact hours (3 total): 3 lecture

Further development of academic writing, research, and revision strategies introduced in English 1. Primary focus on the development of argumentation and critical thinking skills; synthesis and analysis of information; evaluation and incorporation of scholarly sources to create a variety of academic and multimodal texts, including a fully documented research project. Writing intensive, with a minimum course total of 5000 words (20 pages).

Prerequisite(s): ENG 1111 with a grade of C or higher

Terms Offered: Fall, Spring, Summer

### **ENG 1600 Introduction to Literature (3)**

Contact hours (3 total): 3 lecture

Critical readings, discussion and analysis of poetry, fiction, and drama.

Pre/Corequisite(s): ENG 1111

Global Awareness.

Terms Offered: Fall, Spring, Summer

### **ENG 2211 Business Communication (3)**

Contact hours (3 total): 3 lecture

Preparing and analyzing business documents using fundamental business communication principles and standards, technology, critical thinking skills, and research techniques in preparation for the workplace. Substantial focus on customs and traditions of a non-English-speaking country and the impact of those customs and traditions on expanding American business to that country. Development of oral communication skills using appropriate technology, strategy, and methods. Use of digital recording and PowerPoint slide projection equipment in online sections.

Prerequisite(s): ENG 1111 or OAD 1105

Global Awareness.

Terms Offered: Fall, Spring, Summer

### **ENG 2230 Technical Report Writing (3)**

Contact hours (3 total): 3 lecture

Technical communications encountered on the job, including memos, technical definitions, descriptions, instructions and procedures, proposals, progress reports, analytical reports, oral presentations, and e-mail.

Prerequisite(s): ENG 1111

Terms Offered: Spring, Summer

### **ENG 2250 Creative Writing (3)**

Contact hours (3 total): 3 lecture

Introduction and discussion of three major literary genres: fiction, poetry, and drama. Writing a collection of poems, short and long fiction, a one-act script, a screen play or play, and a literary analysis.

Prerequisite(s): ENG 1111

Terms Offered: Fall

### **ENG 2300 Great Books: World Literature (3)**

Contact hours (3 total): 3 lecture

Chronological selection of the major works, genres, and periods of world literature beginning with the ancients and progressing through modern times.

Prerequisite(s): ENG 1111

Pre/Corequisite(s): ENG 1112

Global Awareness.

Terms Offered: Fall, Spring, Summer

### **ENG 2510 American Literature I (3)**

Contact hours (3 total): 3 lecture

Survey of American literary works from America's early beginnings to 1865. Major writers, literary movements, forms and themes of national literature.

Prerequisite(s): ENG 1111

Terms Offered: Fall

### **ENG 2520 American Literature II (3)**

Contact hours (3 total): 3 lecture

Survey of American literary works from 1865 to present. Major writers, literary movements, forms and themes of national literature.

Prerequisite(s): ENG 1111

Terms Offered: Spring

### **ENG 2610 British Literature to 1800 (3)**

Contact hours (3 total): 3 lecture

Survey of the major works and periods of British literature from 700 to 1800.

Prerequisite(s): ENG 1111

Global Awareness.

Terms Offered: Fall, Summer

### **ENG 2620 British Literature from 1800 to the Present (3)**

Contact hours (3 total): 3 lecture

Survey of major works, themes ideas, and periods of British literature from 1800 to the present time.

Prerequisite(s): ENG 1111

Terms Offered: Spring

## **(ENT) ENGINEERING TECHNOLOGY**

### **ENT 1000 Introduction to Industrial and Engineering Technology (3)**

Contact hours (4 total): 2 lecture, 2 lab

Exploration of industrial and engineering technology careers. Introduction to sketching, critical thinking, design, and project management skills. Introduction to campus resources and computer services. Time management, study skills, communication skills. Using electronic media for information gathering, presentations, communication and data management.

Prerequisite(s): Must have a NextGen Accuplacer score of Reading 220+, and Math 220+

Lab Fee: \$25.00

Terms Offered: Fall, Spring, Summer

### **ENT 1010 Introduction to Semiconductors (3)**

Contact hours (4 total): 2 lecture, 2 lab

Career opportunities within the semiconductor industry; manufacturing and processing of semiconductor wafers and integrated circuits; simulated cleanroom environment; chemical safety and Standard Operating Procedures (SOP).

Pre/Corequisite(s): ENT 1050

Lab Fee: \$25.00

Terms Offered: Fall, Spring



### **ENT 1050 Manufacturing Foundations (4)**

Contact hours (6 total): 2 lecture, 4 lab

Instruction in print reading and part visualization from drawings, including sketching multi-view drawings and three-dimensional models, location of key features and dimensioning specifications. Beginning concepts in geometric dimensioning and tolerancing. Instruction in using precision measurement tools including, but not limited to: scales, calipers, micrometers, dial indicators, coordinate measurement machines. The use of computer interfaces in metrology and basic statistical process control. Topics in lean manufacturing.

Prerequisite(s): Must have a NextGen Accuplacer score of Reading 220+, and Pre-Algebra/Math 220+

Lab Fee: \$25.00

Terms Offered: Fall, Spring

### **ENT 1310 Computer Numerical Control (CNC) Machine Operator - Turning (3)**

Contact hours (4 total): 2 lecture, 2 lab

Focuses on the Computer Numerical Control (CNC) lathe machine operator, including such tasks as maintaining machines, recording Statistical Process Control (SPC) data, tool identification and set-up, machining processes and quality inspection.

Pre/Corequisite(s): ENT 1050

Lab Fee: \$100.00

Terms Offered: Fall, Spring

### **ENT 1320 Computer Numerical Control (CNC) Machine Operator - Milling (3)**

Contact hours (4 total): 2 lecture, 2 lab

Focuses on the Computer Numerical Control (CNC) milling machine operator, including such tasks as maintaining machines, recording Statistical Process Control (SPC) data, tool identification and set-up, machining processes and quality inspection.

Pre/Corequisite(s): ENT 1050

Lab Fee: \$100.00

Terms Offered: Fall, Spring

### **ENT 1330 Fundamentals of Computer Numerical Control (CNC) (3)**

Contact hours (4 total): 2 lecture, 2 lab

An introduction to G and M codes necessary to program Computer Numerical Controlled (CNC) machines with an emphasis on programming and operations of machining and turning centers. Emphasis on tool geometry, tool selection, and the tool library. Instruction in Computer-Aided Manufacturing (CAM) software.

Prerequisite(s): ENT 1310 and ENT 1320

Lab Fee: \$50.00

Terms Offered: Fall, Spring

### **ENT 1410 Introduction to Additive Manufacturing (3)**

Contact hours (4 total): 2 lecture, 2 lab

Principles of the applications of Additive Manufacturing. Advantages of using Additive Manufacturing over traditional Subtractive Manufacturing processes. An overview of the most widely used technologies, materials and applications. Create files, select appropriate technology, build settings and parameters, and print complex three-dimensional parts.

Prerequisite(s): CAD 2100 or CAD 2110

Lab Fee: \$100.00

Terms Offered: Fall, Spring

### **ENT 1420 Rapid Prototyping Model Design and Fabrication (3)**

Contact hours (4 total): 2 lecture, 2 lab

Examines the key elements of product development from the concept through design to production. Provides knowledge of the theory of Rapid Prototyping and enables critical thinking in new product development, process building, sustainability, and innovation theories. Engineering parts inspection and reverse engineering processes employing 3 Dimensional (3D) printing, scanning, and Coordinate Measuring.

Prerequisite(s): CAD 2100 or CAD 2110

Lab Fee: \$100.00

Terms Offered: Fall, Spring

### **ENT 1450 Direct Current (DC) Circuits (3)**

Contact hours (4 total): 2 lecture, 2 lab

Examine series, parallel, and series-parallel circuits. Apply circuits laws and theorems including Kirchhoff's Law, Thevenin's Theorem, Norton's Theorem, and superposition theorem. Analyze electrical components and determine their role in an electrical circuit. Discussion of capacitors and inductance.

Pre/Corequisite(s): MTH 1280 and ENT 1000

Lab Fee: \$25.00

Terms Offered: Fall, Spring

### **ENT 1460 Alternating Current (AC) Circuits (3)**

Contact hours (4 total): 2 lecture, 2 lab

Examine Alternating Current (AC) fundamentals including complex numbers, impedance concepts, resonance, transformers, superposition theorem, Thevenin's Theorem, Norton's Theorem, and power transfer theorems.

Prerequisite(s): ENT 1450 and MTH 1340

Lab Fee: \$25.00

Terms Offered: Fall, Spring

### **ENT 1500 Engineering Materials (3)**

Contact hours (4 total): 2 lecture, 2 lab

Structural and mechanical properties of ferrous (iron) and non-ferrous (aluminum, copper, nickel, etc.) materials and alloys. Non-metallic materials such as glass, ceramics, concrete, wood, and electromagnetic and semi-conductor materials.

Prerequisite(s): ENT 1050

Lab Fee: \$30.00

Terms Offered: Fall, Spring

### **ENT 1600 Introduction to Robotics (3)**

Contact hours (4 total): 2 lecture, 2 lab

Investigating the history and evolution of robotics. Classification and characteristics of robots, robotic applications, and safety protocols. Introduction of various industrial robotic teach pendants and robotic movement. Introduction to robotic programming.

Pre/Corequisite(s): ENT 1050

Lab Fee: \$30.00

Terms Offered: Fall, Spring

### **ENT 1650 Robotic Applications (3)**

Contact hours (4 total): 2 lecture, 2 lab

Program and operate FANUC and Motoman robots. Develop programming skills for material handling, including the integration of vision systems and conveyors.

Prerequisite(s): ENT 1600

Lab Fee: \$30.00

Terms Offered: Fall, Spring



### **ENT 1700 Robot Maintenance (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Robot maintenance procedures, preventive maintenance, and troubleshooting techniques. Hands-on maintenance and troubleshooting.

Prerequisite(s): ENT 1600

Lab Fee: \$30.00

Terms Offered: Fall, Spring

### **ENT 1750 Robotic Welding (3)**

Contact hours (4 total): 2 lecture, 2 lab

Program and operate a FANUC robotic weld cell.

Introduction to Gas Metal Arc Welding (GMAW), including safety, joint designs, and troubleshooting.

Prerequisite(s): ENT 1600

Lab Fee: \$100.00

Terms Offered: Fall, Spring

### **ENT 2100 Manufacturing Processes (3)**

Contact hours (4 total): 2 lecture, 2 lab

Overview of manufacturing process, including machine tool operations, metal forming, welding processes, and casting. Setup and operation of metal lathe, mill, drill press, band saw, and grinder for the completion of lathe and milling projects.

Prerequisite(s): ENT 1050

Lab Fee: \$60.00

Terms Offered: Fall, Spring

### **ENT 2200 Statics (3)**

Contact hours (4 total): 2 lecture, 2 lab

The force analysis of rigid bodies at rest: vectors, forces, moments, centroids, equilibrium conditions, analysis of trusses and frames, friction, moments of inertia, and applications.

Prerequisite(s): ENT 1000 and MTH 1340

Lab Fee: \$10.00

Terms Offered: Spring

### **ENT 2300 Strength of Materials (3)**

Contact hours (4 total): 2 lecture, 2 lab

Equilibrium, stress and strain, review of centroids and moments of inertia, torsion, stresses and deflections in beams, combined loading, compression members, and Mohr's Circle Method.

Prerequisite(s): ENT 2200

Lab Fee: \$15.00

Terms Offered: Spring

### **ENT 2600 Engineering Design (3)**

Contact hours (4 total): 2 lecture, 2 lab

Analysis of machine design. Design and development of engineering drawings for machine components. Converting engineering drawings into working prototypes. Computer simulations and destructive testing on designs.

Pre/Corequisite(s): ENT 2100

Lab Fee: \$40.00

Terms Offered: Fall, Spring

### **ENT 2700 Engineering Technology Project (3)**

Contact hours (4 total): 2 lecture, 2 lab

Capstone class. Application of industrial and engineering technology skills to design, fabricate, install, document and debug a class-designed project of a scale and type normally done in-house by local plants in the areas of engineering and design.

Prerequisite(s): ENT 1050

Pre/Corequisite(s): ENT 1500 and ENT 2100

Lab Fee: \$20.00

Terms Offered: Spring

## **(FFC) FIRE FIGHTER CERTIFICATE**

### **FFC 1010 Volunteer Firefighter (1)**

Contact hours (2.70 total): 0.20 lecture, 2.5 lab

Basic firefighter course used by volunteer fire departments. Minimum training, State of Ohio defined as Awareness level only. (SCBA) self contained breathing apparatus, hose streams, fire behavior. (Financial aid is not available for this course.)

Prerequisite(s): NIMS 100, 700 and ENG 0980 or ENG 1111

Instructor Permission Required.

Lab Fee: \$155.00

Terms Offered: Fall, Spring, Summer

### **FFC 1020 Firefighter I Transition (5)**

Contact hours (8 total): 3.5 lecture, 4.5 lab

Bridge course to expand a 36-hour volunteer firefighter to a level I firefighter. Permits a firefighter to enter and operate at a fire from the interior of a building. (Financial aid is not available for this course.)

Prerequisite(s): ENG 0850 with a grade of C or higher and FFC 1010 (valid 36-hour volunteer certification) and NIMS 100, 700

Instructor Permission Required.

Lab Fee: \$254.00

Terms Offered: Fall, Spring, Summer

### **FFC 1060 Firefighter I (5)**

Contact hours (11 total): 2 lecture, 9 lab

Expanded initial firefighter training. Basic and intermediate level training in all aspects of firefighting for those beginning a career path as a firefighter. (Financial aid is not available for this course.) Prerequisite(s): Must have current 36-hour volunteer Fire Fighter certificate.

Prerequisite(s): CPE 0100 and NIMS 100, 700 ICS

An appropriate college placement test, ACT, or SAT score will satisfy the respective CPE requirement.

Instructor Permission Required.

Lab Fee: \$325.00

Terms Offered: Fall, Spring, Summer

### **FFC 1070 Firefighter I (7)**

Contact hours (11 total): 3 lecture, 8 lab

Expanded initial firefighter training. Basic and intermediate level training in all aspects of firefighting for those beginning a career path as a firefighter. (Financial aid not available for this course.)

Prerequisite(s): NIMS 100, 700 and ENG 0980 or ENG 1111

Instructor Permission Required.

Lab Fee: \$125.00

Terms Offered: Fall, Spring, Summer

### **FFC 2020 Firefighter II (4)**

Contact hours (7 total): 1 lecture, 6 lab

Instruction in advanced techniques of fire behavior, hazardous material, and rescue. This course meets the National Fire Protection Association (NFPA) 1001 standard for career firefighter with instruction in advanced techniques. (Financial aid not available for this course.)

Prerequisite(s): FFC 1060 or FFC 1070

Instructor Permission Required.

Lab Fee: \$475.00

Terms Offered: Fall, Spring, Summer

### **FFC 2050 Firefighter I & II (11)**

Contact hours (17.5 total): 4.5 lecture, 13 lab  
Firefighter training program. 260-hour course encompasses all aspects of fire, rescue, hazardous materials, and extrication. Meets all NFPA 1001 standards. (Financial aid is not available for this course.)  
Prerequisite(s): ENG 0850 with a grade of C or higher and NIMS 100, 700  
Instructor Permission Required.  
Lab Fee: \$325.00  
Terms Offered: Fall, Spring, Summer

### **FFC 2070 PSI (Public Safety Instructor) (3)**

Contact hours (5 total): 2 lecture, 3 lab  
Meets the State of Ohio and (NFPA) National Fire Protection Association 1041 standard for fire service instructor I and II. Basic instructional knowledge to develop skills for preparing and presenting training for fire and emergency services personnel. (Financial aid is not available for this course.)  
Prerequisite(s): State of Ohio Level II Firefighter Card  
Instructor Permission Required.  
Terms Offered: Fall, Spring

### **FFC 2080 FSI (Fire Safety Inspector) (3)**

Contact hours (5 total): 2 lecture, 3 lab  
Meets the requirements for the fire safety inspector as required by H.B. 590 and (NFPA) National Fire Protection Association 1031. Fundamental knowledge and skills necessary to conduct fire safety inspections. Various codes needed to develop a working knowledge of the inspection process. (Financial aid is not available for this course.)  
Prerequisite(s): Firefighter certification and Other (Check with College's Fire Training Coordinator)  
Instructor Permission Required.  
Terms Offered: Fall, Spring

## **(FST) FOOD SCIENCE TECHNOLOGIES**

### **FST 1100 Introduction to Food Science (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Fundamental concepts in food science including food processing, food chemistry, human nutrition, food safety, and sanitation. Students will be handling and processing food.  
Prerequisite(s): ENG 0900 with a grade of C or higher, and MTH 0500 with a grade of C or higher  
Lab Fee: \$50.00  
Terms Offered: Fall

### **FST 1200 Introduction to Food Processing (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Fundamental concepts in food processing, including unit operations, food formulations, identification of major processing equipment, and basic quality assurance techniques.  
Prerequisite(s): FST 1100  
Pre/Corequisite(s): AGR 1100 and ENG 1111  
Lab Fee: \$50.00  
Certification Fee: \$90.00  
Terms Offered: Spring

### **FST 2000 Food Marketing (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Management of marketing functions in food industry, focusing on stages of research processes including planning, gathering, analyzing, and interpreting data related to food marketing management.  
Prerequisite(s): ENG 0900 with a grade of C or higher  
Terms Offered: Fall

### **FST 2300 Hazard Analysis and Critical Control Points (HACCP) (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Introduction to relationship of Good Manufacturing Practices (GMPs), Sanitation Standard Operating Procedures (SSOPs), the seven principles of Hazard Analysis and Critical Control Points (HACCP), and proper control of physical, chemical, and biological hazards.  
Prerequisite(s): FST 1200  
Lab Fee: \$50.00  
Certification Fee: \$65.00  
Terms Offered: Fall

### **FST 2400 Food Laws and Regulations (3)**

Contact hours (3 total): 3 lecture  
Introduction to laws, regulations, history, and policies that govern food regulation in the United States.  
Prerequisite(s): FST 2300  
Terms Offered: Spring

### **FST 2700 Advanced Topics in Food Science (4)**

Contact hours (6 total): 2 lecture, 4 lab  
Development of strategy and policy, industry analysis of product development, and process implementation. Coordination of food science, food processing, marketing, Hazard Analysis and Critical Control Points (HACCP), and food law and regulation.  
Prerequisite(s): FST 2000 and FST 2300  
Corequisite(s): FST 2400  
Lab Fee: \$50.00  
Terms Offered: Spring

## **(FYE) FIRST YEAR EXPERIENCE**

### **FYE 1101 College Success (1)**

Contact hours (1 total): 1 lecture  
Academic success strategies, self-exploration, and establishment of Clark State College connections and support. Emphasis on developing a sense of acceptance and inclusion through student application of strategies and techniques to be a successful and engaged member of the college community.  
Prerequisite(s): Accuplacer score of Reading 220+  
Terms Offered: Fall, Spring, Summer

## **(GEO) GEOGRAPHY**

### **GEO 1000 Introduction to Cartography with GIS (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Geographic Information Systems (GIS), their capabilities, uses, and limitations. Basic cartographic concepts including manipulation, analysis, and graphic representation of spatial information. Emphasis on technology of map design principles with GIS and desktop mapping programs.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher and MTH 0500 with a grade of C or higher  
Global Awareness.  
Lab Fee: \$50.00  
Terms Offered: Fall, Spring, Summer

### **GEO 1100 Human Geography (3)**

Contact hours (3 total): 3 lecture

Survey of the distribution of culture, language, religion, and economic and political activities across the world; the role of ethnicity and the occurrence of ethnic conflict; map of the distribution of human activities, links between culture and politics, culture and religion, economic development, and natural resources; rural and urban settlements and patterns of population growth.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall, Spring

### **GEO 1400 Introduction to Physical Geography (3)**

Contact hours (3 total): 3 lecture

Earth-Sun relationships and their connection to latitude and longitude; the processes responsible for the evolution of surface landscapes; general weather patterns; general climate zones and soil profiles; how climate variations relate to global distributions of plants and animals; glacial, fluvial, coastal landscapes, and the processes associated with them; components associated with weather and atmospheric processes such as cloud types, precipitation, pressure, and wind; global environmental change and factors responsible for it.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring

### **GEO 2200 World Regional Geography (3)**

Contact hours (3 total): 3 lecture

Human interaction with the physical environment across regions; cultural practices, religious practices, and political practices and their interaction with the natural surroundings; human impact on the environment and the impact of the environment on human activities; mapping the distribution of these activities across the globe; comparing and contrasting major world regions.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall, Spring, Summer

## **(GLG) GEOLOGY**

### **GLG 1131 Physical Geology (4)**

Contact hours (5 total): 3 lecture, 2 lab

Study of the materials of which the world is composed. Examination of ongoing surface processes such as the movement of water and ices, formation of the land shape about us, and the chemical and mechanical breakdown of earth materials. Processes leading to mountain building, alteration of deep and near surface rocks, and earthquakes.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Lab Fee: \$45.00

Terms Offered: Fall, Summer

### **GLG 1132 Historical Geology (4)**

Contact hours (5 total): 3 lecture, 2 lab

Study of earth in space; physical evolution of oceans, atmosphere, and continents; origins of life and biological evolution; physical and biological development of the North American continent.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Lab Fee: \$45.00

Terms Offered: Spring, Summer

### **GLG 1133 Environmental Geology (4)**

Contact hours (5 total): 3 lecture, 2 lab

The interaction of geological processes with the purposes posed by humans. Includes use and misuse of resources, hazardous environments, engineering difficulties, waste, and effects on health.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Lab Fee: \$45.00

Terms Offered: Fall, Spring, Summer

## **(GPH) GRAPHIC DESIGN**

### **GPH 1001 Introduction to Graphic Design (3)**

Contact hours (4 total): 2 lecture, 2 lab

Survey of graphic design as a profession, theory and practice, basic principles, and fundamentals. Introduction to the Macintosh (Mac) as an artistic tool. Introduction to Adobe InDesign, Adobe Illustrator, and Adobe Photoshop.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Lab Fee: \$85.00

Terms Offered: Fall

### **GPH 1110 Digital Illustration I (3)**

Contact hours (4 total): 2 lecture, 2 lab

Use of Adobe Illustrator for technical illustration.

Generating professional quality technical drawings and information graphics.

Prerequisite(s): GPH 1001 and ART 1111

Lab Fee: \$85.00

Terms Offered: Spring

### **GPH 1112 Typography (3)**

Contact hours (4 total): 2 lecture, 2 lab

The study of type characteristics. Practical application of basic and intermediate typographic principles within the design process. Use of Illustrator and InDesign.

Prerequisite(s): GPH 1001

Lab Fee: \$85.00

Terms Offered: Spring

### **GPH 1201 Electronic Imagery I (3)**

Contact hours (4 total): 2 lecture, 2 lab

Basic to intermediate image editing, including scanning, retouching, effects, selections, and composite imagery. Adobe Photoshop utilized.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Lab Fee: \$85.00

Terms Offered: Fall, Spring

### **GPH 2011 Computer Layout I (3)**

Contact hours (4 total): 2 lecture, 2 lab

Layout and design using a variety of layout formats in black and white and/or color. Creative problem solving through the use of thumbnails and comprehensives.

Software: Adobe InDesign, Illustrator, and Photoshop.

Prerequisite(s): GPH 1112 with a grade of C or higher and GPH 1201 with a grade of C or higher

Lab Fee: \$85.00

Terms Offered: Fall

### **GPH 2012 Computer Layout II (3)**

Contact hours (4 total): 2 lecture, 2 lab

Advanced layout and design in advertising. Creative problem solving through the use of thumbnails and computer refined comprehensives. Software: Quark Xpress, Adobe InDesign, Adobe Illustrator, and Adobe Photoshop.

Prerequisite(s): GPH 2011 with a grade of C or higher

Lab Fee: \$85.00

Terms Offered: Spring

### **GPH 2051 Professional Development (3)**

Contact hours (4 total): 2 lecture, 2 lab

Development of portfolio, cover letter, resume, and interview skills. Examination of professional qualifications, image, and methods of self-promotion for the purpose of seeking employment and free-lance work.

Prerequisite(s): GPH 2011 with a grade of C or higher and GPH 2111 with a grade of C or higher and GPH 2202 with a grade of C or higher and GPH 2120 with a grade of C or higher

Lab Fee: \$165.00

Terms Offered: Spring

### **GPH 2085 Service Learning Capstone (3)**

Contact hours (4 total): 2 lecture, 2 lab

Assemble a design studio, creating work for “real-world” clients. Application of principles, theories, training, skills, and experiences.

Prerequisite(s): GPH 2011 with a grade of C or higher and GPH 2111 with a grade of C or higher and GPH 2202 with a grade of C or higher and GPH 2120 with a grade of C or higher

Lab Fee: \$85.00

Terms Offered: Spring

### **GPH 2111 Digital Illustration II (3)**

Contact hours (4 total): 2 lecture, 2 lab

Advanced study in developing illustrations. Special emphasis placed on using Adobe Illustrator and Adobe Photoshop to produce professional quality illustrations and graphics.

Prerequisite(s): GPH 1110 with a grade of C or higher

Lab Fee: \$85.00

Terms Offered: Fall

### **GPH 2120 Logo, Symbol, Corporate I.D. (3)**

Contact hours (4 total): 2 lecture, 2 lab

Application and study of type, logo/trademark, and symbols for the creation of identification systems and to support brand development. Software: Adobe Illustrator.

Prerequisite(s): GPH 1110 with a grade of C or higher and GPH 1112 with a grade of C or higher

Lab Fee: \$85.00

Terms Offered: Fall

### **GPH 2202 Electronic Imagery II (3)**

Contact hours (4 total): 2 lecture, 2 lab

Advanced image editing from retouching and coloring images to working with selections, layers, type, and composite imagery. Adobe Photoshop utilized.

Prerequisite(s): GPH 1201 with a grade of C or higher

Lab Fee: \$85.00

Terms Offered: Fall

## **(GST) GEOSPATIAL TECHNOLOGIES**

### **GST 1000 Geospatial Program Orientation (1)**

Contact hours (1.5 total): 0.5 lecture, 1 lab

Overview of the Geospatial Technologies Program.

Introduction to campus resources and time-management, study, and communication skills.

Prerequisite(s): CPE 0200 or ENG 0850 with a grade of C or higher and CPE 0300 or ENG 0900 with a grade of C or higher

An appropriate college placement test, ACT, or SAT score will satisfy the respective CPE requirement.

Terms Offered: Fall

### **GST 1300 Introduction to UAS (3)**

Contact hours (3 total): 3 lecture

Introduction to Unmanned Aerial Systems (UAS) platforms, their history, commercial applications. Special emphasis in precision agriculture, Federal Aviation Administration (FAA) regulatory framework, data collection, privacy issues, and navigation concepts.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$25.00

Terms Offered: Fall, Spring

### **GST 1350 UAS Operations, Planning, and Piloting (3)**

Contact hours (4 total): 2 lecture, 2 lab

Training on unmanned aerial systems (UAS) operations. Practical flight training on simulators, and mini and mid-sized unmanned aerial vehicles (UAV). Development of flight plans for a variety of situations and purposes supported by industry-standard operations and safety protocols. Demonstration of commercial UAS missions.

Prerequisite(s): GST 1300 and GEO 1000

Instructor Permission Required.

Lab Fee: \$100.00

Terms Offered: Spring

### **GST 1400 Mapping and Georeferencing with GIS (3)**

Contact hours (4 total): 2 lecture, 2 lab

Processing, editing, and mapping spatial data in the context of solving geospatial problems. Creation and use of locational data using both continuous and discrete georeferencing methods. Translating vector and raster data into correct cartographic formats. Creation and editing of metadata.

Prerequisite(s): GEO 1000, ITS 1105, or AGR 1100

Pre/Corequisite(s): MTH 0750 or MTH 1200 with a grade of C or higher

Lab Fee: \$50.00

Terms Offered: Spring

### **GST 1500 Remote Sensing (3)**

Contact hours (4 total): 2 lecture, 2 lab

Collection and processing of aerial data; interpretation of aerial photography data. Map analysis. Current technology and Geographic Information Systems (GIS) relationship highlighted.

Prerequisite(s): GEO 1000, ITS 1105, or AGR 1100

Pre/Corequisite(s): MTH 0750 or MTH 1200 with a grade of C or higher

Lab Fee: \$100.00

Terms Offered: Fall, Spring

### **GST 2100 Intermediate GIS Analysis and Data Management (3)**

Contact hours (4 total): 2 lecture, 2 lab

Creation and management of geographic information within a Geographic Information System (GIS). Higher-level applications of and decision making with ArcGIS software. Advanced analysis tools and techniques for visualizing, creating, and managing geographic data within a geographic information system (GIS). Conceptual models and query languages.

Prerequisite(s): GST 1400

Pre/Corequisite(s): CSD 1300 and STT 2640

Lab Fee: \$50.00

Terms Offered: Fall



## **GST 2700 Advanced Topics in Geospatial Technology and GIS (4)**

Contact hours (6 total): 2 lecture, 4 lab

Use of geospatial technology in business, science, government, education, and research. Modeling and decision making using spatial data. Legal and ethical aspects. Trends in geospatial technology. Geodatabases. Capstone project.

Prerequisite(s): CSD 1310 and GST 2100

Lab Fee: \$25.00

Terms Offered: Spring

## **(HRM) HUMAN RESOURCE MANAGEMENT**

### **HRM 1725 Human Resource Management (3)**

Contact hours (3 total): 3 lecture

Examination of the human resource functions in the business organization. Ethical and legal considerations, job analysis, recruitment, selection, training and development, performance management, compensation, safety and health, employee and labor relations, and global human resources. Psychological forces motivating workers, discipline, and morale.

Pre/Corequisite(s): MGT 1060 or MGT 1120

Terms Offered: Fall, Spring, Summer

### **HRM 2300 Training and Development (3)**

Contact hours (3 total): 3 lecture

Comprehensive study of training and organization development. Includes needs assessment, learning theories, training methods, and evaluation. Application through training program creation and presentation. Online sections require students to give virtual presentations.

Pre/Corequisite(s): HRM 1725

Terms Offered: Fall, Spring

### **HRM 2350 Employment Law (3)**

Contact hours (3 total): 3 lecture

Thorough examination of laws regulating employment relationship, discrimination, harassment, performance, and employment environment. Includes legal concepts and forums, sources of law, and terms and conditions of employment.

Prerequisite(s): HRM 1725

Terms Offered: Fall, Spring

### **HRM 2400 Staffing (3)**

Contact hours (3 total): 3 lecture

Staffing models, recruitment strategies, legal compliance, equal opportunity laws, assessment methods, selection process, and staffing management.

Prerequisite(s): HRM 1725

Terms Offered: Fall, Spring

### **HRM 2450 Compensation and Benefits (3)**

Contact hours (3 total): 3 lecture

Broad study of organizational compensation systems, including legal issues, bases for pay, pay structures, executive compensation, and required and discretionary benefits.

Prerequisite(s): HRM 1725

Terms Offered: Fall, Spring

## **(HST) HISTORY**

### **HST 1110 Western Civilization to 1600 (3)**

Contact hours (3 total): 3 lecture

The history of Western Civilization from early man to 1600. Focus on the social, economic, political, religious, and cultural development of the ancient, medieval, and early modern worlds.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall, Spring, Summer

### **HST 1120 Western Civilization Since 1600 (3)**

Contact hours (3 total): 3 lecture

The history of Western Civilization from 1600 to the present. Focus on the social, economic, political, religious, and cultural evolution of the Western world from the age of reason to the Twenty-First Century.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall, Spring, Summer

### **HST 1210 American History to 1865 (3)**

Contact hours (3 total): 3 lecture

American history from before colonization to the Civil War. Focus is on the political, social, economic, and cultural developments that shaped colonial, early national, and antebellum United States.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall, Spring, Summer

### **HST 1220 American History Since 1865 (3)**

Contact hours (3 total): 3 lecture

American history from the end of the Civil War to the present day. Focus is on political, social, cultural, and economic events that shaped current United States history.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall, Spring, Summer

### **HST 1410 African American History to 1877 (3)**

Contact hours (3 total): 3 lecture

Survey of African American history from 1500-1877.

Major turning points in African American social, cultural, economic, political, and religious history from Ancestral Africa through the end of Reconstruction.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall, Spring, Summer

### **HST 1420 African American History Since 1877 (3)**

Contact hours (3 total): 3 lecture

Survey of African American history since 1877. Major themes in African American social, cultural, economic, and political history from the end of Reconstruction to the present.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall, Spring, Summer



## (HUM) HUMANITIES

### **HUM 1110 Introduction to the Humanities (3)**

Contact hours (3 total): 3 lecture

Cross-cultural analysis of the humanities focusing on human forms of expression in the western and non-western world; examines the role of the humanities in contextualizing the values of diverse cultures from the prehistoric age through post-modernism.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall, Spring, Summer

## (HVC) HEATING, VENTILATION, AND COOLING

### **HVC 1015 HVAC-R Fundamentals and Practices (3)**

Contact hours (7 total): 1 lecture, 6 lab

Refrigeration process, changes in state, pressure, temperature, and heat content. Mechanical cycle, absorption refrigeration cycle, systems components, proper selection and use of Heating, Ventilation, Air Conditioning & Refrigeration (HVAC-R) tools and accessories, proper use and testing of electrical components circuits and various electronic instruments. Brazing, soldering, and welding principles including safety, testing brazed joints, oxyacetylene torches, electrical resistance soldering, torch soldering, resistance welding, and plastic fusion welding. Principles of piping and tubing, refrigerant piping materials, copper tubing, and tube sizes for different HVAC-R application.

Prerequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$100.00

Terms Offered: Fall, Spring

### **HVC 1100 Basic Electricity and Motors for HVAC-R (4)**

Contact hours (8 total): 2 lecture, 6 lab

Static electricity, current electricity, direct current, alternating current, power formula, power sources, loads, electrical circuits, control devices and switches, phase shift, power distribution, electric meters, AC induction motors, induction motor principles, capacitor principles, single phase motors, three phase motors, motor protection, start relays, and principles of motor operation. Design and operation of Electronically Commutated Motors (ECM). Electrical HVAC Excellance Certificate preparation.

Prerequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$25.00

Certification Fee: \$25.00

Terms Offered: Fall, Spring

### **HVC 1215 EPA Certifications (2)**

Contact hours (3 total): 1 lecture, 2 lab

EPA mandated educational material in preparation for the EPA 608 and EPA refrigerant exam.

Lab Fee: \$85.00

Certification Fee: \$25.00

Terms Offered: Fall, Spring

### **HVC 1315 Commercial Refrigeration (2)**

Contact hours (2.5 total): 1.5 lecture, 1 lab

Commercial refrigeration evaporators, condensers, expansion devices, and compressors. Describe special refrigeration components, applications of refrigerant systems. Describe the operation of a commercial ice machine. State special refrigeration applications.

Prerequisite(s): HVC 1015

Lab Fee: \$50.00

Terms Offered: Fall, Spring, Summer

### **HVC 2010 Residential Gas Heating (4)**

Contact hours (8 total): 2 lecture, 6 lab

Combustion, fuel installation, startup, checkout, operation and controls in the HVAC-R industry. Control system components, sensing devices, operators, fuel controls, gas valves, and regulators. Troubleshooting heating systems, gas furnaces, electrical or mechanical problems. Gas Heat, Heating, Ventilation, Air Conditioning (HVAC) Excellence Certificate preparation. Remedial action to place system in operating condition.

Prerequisite(s): HVC 1100

Lab Fee: \$30.00

Certification Fee: \$25.00

Terms Offered: Fall, Spring, Summer

### **HVC 2030 Heat Pump Systems (2)**

Contact hours (3 total): 3 lab

History of heat pumps, heat pump cycles, air source systems, water source systems, air-to-water systems, and heat pump efficiency ratings. Troubleshooting of air system problems, refrigeration system problems, problem analysis.

Prerequisite(s): HVC 1015, HVC 1100, and HVC 1315

Lab Fee: \$25.00

Terms Offered: Spring, Summer

### **HVC 2040 Oil and Hydronic Heat (2)**

Contact hours (2.5 total): 1.5 lecture, 1 lab

Oil-fired forced air systems. Types of furnaces, ratings and efficiencies. Oil storage. Primary oil burner controls and oil valves. Oil service: startup, sequence operation, efficiency testing, over-fire draft, smoke testing, efficiency calculations, routine maintenance, and soot management. Troubleshooting oil heating systems. Air handling units, water chillers used in the Heating, Ventilation, Air Conditioning, Refrigeration (HVAC-R) industry, hydronic heating, boilers and cooling towers.

Prerequisite(s): HVC 1015 and HVC 1100

Lab Fee: \$25.00

Terms Offered: Fall, Spring, Summer

### **HVC 2220 Residential Electric Heating (1)**

Contact hours (3 total): 3 lab

Electric furnaces: applications, air handling units, duct heaters, system components, safety, and heating elements. Troubleshooting components of an electric furnace.

Prerequisite(s): HVC 1015 and HVC 1100

Lab Fee: \$25.00

Terms Offered: Fall, Spring

### **HVC 2315 Air Conditioning (2)**

Contact hours (4 total): 1 lecture, 3 lab

Air conditioning systems: types of unitary equipment, room air conditioners, construction and installation, performance and operation, controls, dehumidifier units, single package conditioners, horizontal conditioners, vertical conditioners, rooftop conditioners, and desiccant cooling systems. Air handling units: types of air handling units, fan coil units, and central station air handling units. Package unit electrical systems: mixing dampers, mixed air control, face and bypass control, variable air volume control system, multi-zone unit and fans and motors. Central air conditioning: adjusting airflow, determining system capacity, split system conditioners, add-on coils, air cooled condensing units, outdoor installation, refrigerant piping, condensing units and evaporators. Troubleshooting air conditioning systems. Heating, Ventilation, Air Conditioning (HVAC) Excellence certification preparation.

Prerequisite(s): HVC 1015 and HVC 1315

Lab Fee: \$150.00

Certification Fee: \$25.00

Terms Offered: Fall, Summer

### **HVC 2415 Indoor Air Quality and Distribution (3)**

Contact hours (3 total): 3 lecture

Duct system types, extended plenum, air distribution and balancing, and air quality. Zoning, types of zone dampers, and types of zoning systems. Testing general requirements, report forms, instruments for testing, and balancing the complete system. Refrigeration and residential heating load calculations. Air conditioning, indoor air quality, filters, and humidifiers. Role of the Heating, Ventilation, Air Conditioning (HVAC) technician.

Prerequisite(s): HVC 1015 and HVC 1100

Lab Fee: \$10.00

Terms Offered: Fall, Summer

### **HVC 2700 HVAC-R Job Skills (2)**

Contact hours (4 total): 4 lab

Advanced installation techniques; codes, ordinances, and standards; international residential code; equipment placement; refrigerant charging; oil charging. Customer service and planned maintenance.

Pre/Corequisite(s): HVC 1015, HVC 1100, and HVC 2010

Terms Offered: Fall, Summer

## **(INS) INSURANCE**

### **INS 1050 Property and Liability Insurance Principles (3)**

Contact hours (4 total): 2 lecture, 2 lab

Insurance characteristics and purposes. Types of insurance. Underwriting, determining rates, marketing. Insurance company financial performance, risk management, loss exposure, and insurance contracts.

Prerequisite(s): ITS 0700 and ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring

### **INS 1100 Insurance Claims Handling Principles/Practices (3)**

Contact hours (4 total): 2 lecture, 2 lab

Develop and enhance professionalism and skills in handling property-casualty insurance claims. Investigate cause of loss, liability, and damages. Negotiation and litigation techniques in claim settlements. Ability to recognize insurance fraud and ethical situations.

Prerequisite(s): MTH 0500 with a grade of C or higher

Pre/Corequisite(s): ENG 0980 with a grade of C or higher and INS 1050

Lab Fee: \$0.00

Terms Offered: Fall, Spring

### **INS 1115 Customer Service for the Insurance Industry (2)**

Contact hours (2 total): 2 lecture

Develop and enhance professionalism and skills in handling insurance claims. Provide proper customer service to clients and claimants.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring

### **INS 1200 Software for the Insurance Claims Industry (1)**

Contact hours (1 total): 1 lecture

Review of computer fundamentals. Use of specialized software for the insurance-claims industry.

Prerequisite(s): MTH 0500 with a grade of C or higher

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring

### **INS 1325 Property Coverages (3)**

Contact hours (3 total): 3 lecture

Property loss exposure and coverages. Specialized property coverages. Commercial property and business income insurance. Commercial crime and equipment breakdown insurance. Inland, ocean marine, farm, and other specialty coverages.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher and INS 1050

Terms Offered: Fall, Spring

### **INS 1400 Property Loss Adjusting (5)**

Contact hours (5 total): 5 lecture

Property loss adjusting with special emphasis on persons/property insurance coverage, causes of loss, loss adjusting process and procedures, fraud, residential construction, preparing estimates (cost estimating software), merchandise/time element loss, auto physical damage, and contractor equipment.

Prerequisite(s): MTH 0500 with a grade of C or higher

Pre/Corequisite(s): ENG 0980 with a grade of C or above and INS 1050

Lab Fee: \$0.00

Terms Offered: Spring

# (INT) INDUSTRIAL TECHNOLOGY

## INT 1000 OSHA 10-Hour General Safety (1)

Contact hours (1 total): 1 lecture

Training program for general industry. Provides training for workers and employers on the recognition, avoidance, abatement, and prevention of safety and health hazards in work place settings. (10-Hour General Industry Certificate)

Prerequisite(s): Must have a NextGen Accuplacer score of Reading 220+, Writing 2+

Certification Fee: \$25.00

Terms Offered: Fall, Spring, Summer

## INT 1010 Introduction to Vacuum Systems (2)

Contact hours (4 total): 1 lecture, 3 lab

Operational mechanisms and use of vacuum pumps in the semiconductor industry; operational methodology and use of equipment that requires vacuum pumps in the semiconductor industry; maintenance on a vacuum system.

Pre/Corequisite(s): ENT 1050

Lab Fee: \$25.00

Terms Offered: Fall, Spring, Summer

## INT 1050 Blueprint Reading and Schematics (3)

Contact hours (5 total): 2 lecture, 3 lab

Part visualization from drawings, location of key features, drawing dimensioning methods, geometric dimensioning and tolerancing symbols. Electrical, Heating, Ventilation, Air Conditioning and Refrigeration (HVAC-R), pneumatic and hydraulic, and wiring schematics, symbols, and diagrams. Interpretation of drawing specifications.

Prerequisite(s): ENG 0850 with a grade of C or higher

Lab Fee: \$10.00

Terms Offered: Fall, Spring, Summer

## INT 1210 Pneumatics I (1)

Contact hours (2 total): 0.5 lecture, 1.5 lab

Introduction to pneumatic power, safety, pneumatic circuits and schematics. Principles of pressure, flow and speed control. Use of pneumatic components such as cylinders, valves, actuators; applications including pressure and cylinder force, pneumatic leverage, pressure and volumes, and air flow resistance.

Pre/Corequisite(s): ENT 1050

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

## INT 1220 Pneumatics II (1)

Contact hours (2 total): 0.5 lecture, 1.5 lab

Operation, installation, performance analysis, maintenance, and design of pneumatic systems. Topics covered: cam-operated valves, cylinder sequencing with cam valves, cylinder deceleration circuits, pilot-operated directional control valves, shuttle valves, air logic components, air logic design, air filters, filter selection, filter maintenance, water removal techniques, air dryers, after-coolers, water traps, air lubricators, and component maintenance.

Prerequisite(s): INT 1210

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

## INT 1230 Pneumatics Troubleshooting (1)

Contact hours (2 total): 0.5 lecture, 1.5 lab

Pneumatic troubleshooting skills in air preparation, actuators and valves, vacuum systems, and pneumatics systems. Hands-on practice including pressure test points; symptoms and causes of regulator failure; operation of an internal pilot-operated directional control valve; inspection and troubleshooting a vacuum cup; troubleshooting zero pressure.

Prerequisite(s): INT 1220

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

## INT 1240 Hydraulics I (1)

Contact hours (2 total): 0.5 lecture, 1.5 lab

Introduction to hydraulic power. Topics covered: hydraulic power & safety, hydraulic circuits, hydraulic schematics, principles of hydraulic pressure and flow, and hydraulic speed control circuits; applications covering pumps, hydraulic circuits, cylinders and valves, and fluid friction.

Pre/Corequisite(s): ENT 1050

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

## INT 1250 Hydraulics II (1)

Contact hours (2 total): 0.5 lecture, 1.5 lab

Operation, installation, performance analysis, maintenance, and design of hydraulic systems. Topics include: accumulator sizing, system design, circuit applications, component operation/installation, pilot-operated directional control valves (DCVs), 2-stage DCVs, cam-operated DCVs, DCV spool center types and applications, cylinder types and mountings, pressure-compensated flow control valves, pilot-operated check valves, direct-operated relief valves, non-compensated flow control valves, rapid traverse slow feed circuits, cylinder sequencing, remote pressure control, pump unloading circuits, and p-port check valves.

Prerequisite(s): INT 1240

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

## INT 1310 AC/DC Electrical Systems (2)

Contact hours (3 total): 1 lecture, 2 lab

Basics of alternating current and direct current. Fundamentals of electrical systems including basic electrical circuits, voltage, current and resistance measurements, series, parallel and combination circuits, inductance and capacitance, and transformers.

Pre/Corequisite(s): ENT 1050

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

## INT 1320 Electrical Control Relay (1)

Contact hours (2 total): 0.5 lecture, 1.5 lab

Functions of relay logic control circuits and application of functions in control logic. Topics covered: electro-pneumatic solenoid valves, sequencing control, relay operation and application, limit switch operation and application; timers and advanced systems, time-delay relays, multiple cylinder control, and machine modes of operation.

Pre/Corequisite(s): ENT 1050

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

**INT 1350 Motor and Motor Controls (3)**

Contact hours (5 total): 2 lecture, 3 lab

Direct and alternating current motors including their performance characteristics and application. Motor control concepts and selection of motors for specific applications. Speed, torque, and power and their effects on motor performance. Industrial mechanical power transmission devices.

Prerequisite(s): INT 1310

Lab Fee: \$80.00

Terms Offered: Fall, Spring, Summer

**INT 1410 Mechanical Systems I (2)**

Contact hours (4 total): 1 lecture, 3 lab

Mechanical systems and practices. Hands-on practice including mechanical system installation, key fasteners, power transmission systems, V-belt drives, chain drives, spur gear drives, and multiple shaft drives.

Pre/Corequisite(s): ENT 1050 or instructor approval

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

**INT 1420 Mechanical Systems II (2)**

Contact hours (4 total): 1 lecture, 3 lab

Construction, operation, installation, and alignment of heavy-duty V-belt drives, synchronous belt drives, and heavy-duty chain drives. Hands-on practice including mechanical system maintenance, troubleshooting, timing belt drives, lubrication, and chain and coupling selection.

Prerequisite(s): INT 1410

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

**INT 1430 Mechanical Systems III (2)**

Contact hours (4 total): 1 lecture, 3 lab

Installation, maintenance, and troubleshooting of bearings, gears, and gear driven systems. Hands-on practice including plain bearings, ball bearings, roller bearings, antifriction bearing selection, gaskets, seals, and gear drives.

Prerequisite(s): INT 1420

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

**INT 2200 Hydraulic and Pneumatic Troubleshooting (3)**

Contact hours (7 total): 1 lecture, 6 lab

Location, identification, and correction of various inserted faults in industrial quality electro-hydraulic and electro-pneumatic systems.

Prerequisite(s): INT 1201

Lab Fee: \$80.00

Terms Offered: Fall, Spring, Summer

**INT 2300 Electrical Troubleshooting (3)**

Contact hours (5 total): 2 lecture, 3 lab

Maintenance and troubleshooting of motors, solenoids, electrical controls, electrical circuitry, and sensors using common testing equipment. Diagnose problems at the component, machine, and inter-machine levels. Introduction and operation of the Computer Integrated Manufacturing System (CIMS).

Prerequisite(s): INT 1320 and INT 1350

Lab Fee: \$75.00

Terms Offered: Fall, Spring, Summer

**INT 2320 DC Electronic Drives (2)**

Contact hours (4 total): 1 lecture, 3 lab

Direct current (DC) electronic motor drives. Hands-on practice including operation, installation, and troubleshooting DC spindle drives, DC servo axis drives, and DC pulse width modulated (PWM) drives.

Prerequisite(s): INT 2300

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

**INT 2330 AC Electronic Drives (2)**

Contact hours (4 total): 1 lecture, 3 lab

Alternating direct current (AC) electronic motor drives. Hands-on practice including functions, operations, configurations, and troubleshooting of an Allen-Bradley PowerFlex 70 drive.

Prerequisite(s): INT 2300

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

**INT 2500 Programmable Logic Control (3)**

Contact hours (5 total): 2 lecture, 3 lab

Programmable Logic Controllers (PLCs). Programming, connecting, and testing PLCs for control of industrial/commercial processes. Interfacing with sensors, using PLCs in a variety of process applications.

Prerequisite(s): INT 1320

Lab Fee: \$40.00

Terms Offered: Fall, Spring, Summer

**INT 2510 Process Control (3)**

Contact hours (5 total): 2 lecture, 3 lab

Principles utilized in process control systems. Systems control of liquid variables such as flow rate, pressure, temperature, liquid level, density, and pH. Calibrate, adjust, install, operate, and connect process control systems in industrial applications.

Prerequisite(s): INT 2500

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

**INT 2520 Supervisory Control and Data Acquisition (SCADA) (3)**

Contact hours (5 total): 2 lecture, 3 lab

Monitor and control process applications using sensors networked to equipment on the plant floor. Introduction to process visualization, universal digital controller (UDC) configuration, process visualization system operation, application editing, project screens, input and output objects, two-state output objects, symbolic input/output field output objects, and alarms.

Prerequisite(s): INT 2510

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

**INT 2800 Industrial Technology Projects (3)**

Contact hours (5 total): 2 lecture, 3 lab

Capstone class to apply skills to design, fabricate, install, document, and debug an assigned project of a scale and type normally done in-house by local plants' engineering and maintenance personnel.

Prerequisite(s): INT 2300

Pre/Corequisite(s): ENG 2211 or ENG 1112

Lab Fee: \$40.00

Terms Offered: Fall, Spring, Summer



# **(ITS) INFORMATION TECHNOLOGY SYSTEMS**

## **ITS 0700 Computer Fundamentals (1)**

Contact hours (2 total): 2 lab

Concepts of computers, operating systems, and network usage. Preparatory course for students with little or no computer background. Graded on an S or U (satisfactory or unsatisfactory) basis.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring

## **ITS 0710 Keyboarding (1)**

Contact hours (2 total): 2 lab

Keyboarding techniques, Fingering techniques, development of speed and accuracy on the keyboard. Office ergonomics and basic electronic file management.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring

## **ITS 1105 Computer Concepts and Software Applications (3)**

Contact hours (4 total): 2 lecture, 2 lab

Overview of basic computer concepts, basic word processing, spreadsheets, databases, and presentation graphics using Microsoft Office.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher, and ITS 0700 and ITS 0710

Terms Offered: Fall, Spring, Summer

## **ITS 1205 Windows Concepts (1)**

Contact hours (2 total): 0 lecture, 2 lab

Familiarization with the mouse and a Graphical User Interface (GUI) operating environment. Major aspects of current Windows Operating System (OS) and usage of WordPad and NotePad. Knowledge of a personal computer keyboard strongly recommended.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher and ITS 0700 and ITS 0710

Terms Offered: Fall, Spring, Summer

## **ITS 1235 Beginning Spreadsheet (1)**

Contact hours (2 total): 2 lab

Creation and manipulation of data within an electronic spreadsheet including planning and creating workbooks, using formulas and functions, creating charts, and formatting spreadsheet objects using Microsoft Excel. Students with minimal computer skills will take longer in completing the assigned tasks.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher and ITS 0700 and ITS 0710

Terms Offered: Fall, Spring, Summer

## **ITS 1238 Intermediate Spreadsheet (2)**

Contact hours (3 total): 1 lecture, 2 lab

Spreadsheet manipulation techniques using Microsoft Excel; functions, managing files and memory, graphing, database functions, programming, and formulas.

Prerequisite(s): ITS 1105 or ITS 1235

Terms Offered: Spring

## **ITS 1245 Beginning Database (1)**

Contact hours (2 total): 2 lab

Database manipulation: creating, updating, and generating reports using Microsoft packaged Access. Keyboarding skills strongly recommended.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher and ITS 0700 and ITS 0710

Terms Offered: Fall, Spring, Summer

## **ITS 1300 Introduction to Computers and Networks (2)**

Contact hours (3 total): 1 lecture, 2 lab

Computer and Internet basics. Overview of computer hardware, software, and networks.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher and ITS 0700 and ITS 0710

Terms Offered: Fall, Spring, Summer

## **ITS 1500 HTML and CSS (3)**

Contact hours (4 total): 2 lecture, 2 lab

Use HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets) to develop websites without the aid of web page composition software. Students are expected to have a basic understanding of basic computer concepts and the internet.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher and MTH 0500 with a grade of C or higher and ITS 0700 and ITS 0710

Lab Fee: \$30.00

Terms Offered: Fall, Spring, Summer

# **(JCR) JUDICIAL COURT REPORTING**

## **JCR 1001 Realtime Theory I (3)**

Contact hours (5 total): 2 lecture, 3 lab

Writing, reading, and translating the written and spoken word by means of a National Court Reporters Association (NCRA) approved, conflict-free realtime theory. Emphasis on mastery of beginning machine shorthand principles, speed development of 40 words per minute (wpm) on dictation of familiar material, and rapid and accurate reading of steno notes. Introduction to realtime career opportunities, professional organizations, ethics of the realtime profession, the National Court Reporters Association (NCRA) code of Professional Ethics, certifications, and life-long learning.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Instructor Permission Required.

Lab Fee: \$80.00

Terms Offered: Fall, Spring

## **JCR 1003 Realtime Theory Applications (3)**

Contact hours (7 total): 1 lecture, 6 lab

Application of realtime theory foundation. Emphasis on mastery of brief forms, phrases, basic realtime editing functions, speed development of 60 words per minute (wpm) on dictation of unfamiliar material, and rapid and accurate reading of steno notes.

Prerequisite(s): JCR 1002S

Lab Fee: \$100.00

Terms Offered: Spring, Summer

## **JCR 1101 Skill Building I (3)**

Contact hours (7 total): 1 lecture, 6 lab

Development of writing skills, readback and analysis of shorthand notes, proofreading skills, and quality practice habits. Dictation in literary, jury charge, and testimony material for development of skill and accuracy in speeds ranging from 50-100 words per minute (wpm). Monitored realtime transcription of speed dictation tests in each of the areas of dictation completed within 70 minutes immediately following recorded dictation. Student analysis of vocabulary, grammar, spelling, and punctuation. Use of online, computer-aided transcription technology with teacher interaction. Designed for competency-based modular instruction.

Prerequisite(s): JCR 1003

Lab Fee: \$100.00

Terms Offered: Fall, Spring



### **JCR 131S Legal Terminology (SS) (3)**

Contact hours (4 total): 2 lecture, 2 lab

Instruction in legal terminology in civil law; criminal law; and the discovery, trial, and appellate processes. Upon completion, the student should be able to comprehend, appreciate, and use legal terms.

Terms Offered: Fall, Spring

### **JCR 2103 Skill Building III (3)**

Contact hours (7 total): 1 lecture, 6 lab

Application of writing skills, readback and analysis of shorthand notes, proofreading skills, and quality practice habits. Dictation in literary, jury charge, and two-voice testimony material for development of skill and accuracy in speeds ranging from 90-160 words per minute (wpm). Development of writing skill in multivoice dictation and use of speaker IDs. Application of computer-integrated courtroom setup knowledge. Monitored transcription of speed dictation tests in each of the areas of dictation concentration completed within 70 minutes immediately following recorded dictation. Student analysis of vocabulary, grammar, spelling, and punctuation. Production of two-page unedited realtime transcript of unfamiliar material with accuracy rate of 96 percent. Use of online, computer-aided transcription technology with teacher interaction. Designed for competency-based modular instruction.

Prerequisite(s): JCR 1102S

Lab Fee: \$100.00

Terms Offered: Fall, Spring, Summer

### **JCR 2105 Skill Building V (3)**

Contact hours (7 total): 1 lecture, 6 lab

Implementation of writing skills, readback and analysis of shorthand notes, proofreading skills, and quality practice habits. Dictation in literary, jury charge, and two-voice testimony material for development of skill and accuracy in speeds ranging from 130-200 words per minute (wpm). Development of writing skill in medical terminology. Execution of writing skill in multivoice dictation and use of speaker IDs. Application of current events tools. Monitored transcription of speed dictation tests in each of the areas of dictation concentration completed within 70 minutes immediately following recorded dictation. Student analysis of vocabulary, grammar, spelling, and punctuation. Production of four-page unedited realtime transcript of unfamiliar material with accuracy rate of 96 percent. Use of online, computer-aided transcription technology with teacher interaction. Designed for competency-based modular instruction.

Prerequisite(s): JCR 2104S

Instructor Permission Required.

Lab Fee: \$100.00

Terms Offered: Fall, Spring

### **JCR 2200 Realtime Business Procedures (3)**

Contact hours (5 total): 1 lecture, 4 lab

Role of the realtime court reporter in trials, depositions, and administrative hearings with application of the National Court Reporters Association (NCRA) Guidelines for Professional Practice for Court Reporters; overview of transcript preparation and production; development of office management skills; overview of broadcast captioning and Communication Access Realtime Translation (CART) including the psychology of on-air captions, Federal Communications Commission (FCC) regulations, broadcast news production, pre-scripting, the NCRA CART Provider's Manual, NCRA Guidelines for Professional Practice for Captioners and CART Providers, and the Americans with Disabilities Act (ADA); overview of interview process; professional development in dress and conduct; involvement in professional associations and appreciation of continuing education.

Terms Offered: Fall, Spring

### **JCR 2300 CAT Transcript Production (2)**

Contact hours (4 total): 1 lecture, 3 lab

Application of principles of transcript editing and production techniques using computer-aided transcription (CAT) software with a focus on CAT terminology, proper scoping and proofreading skills, applying correct grammar rules, dictionary management, parenthetical creation and application, and template file usage in preparation for employment.

Prerequisite(s): JCR 2200

Instructor Permission Required.

Terms Offered: Fall, Spring

## **(LMP) LASER MATERIAL PROCESSING**

### **LMP 1000 Laser Safety (1)**

Contact hours (2 total): 1 lecture, 1 lab

Laser safety. Avoiding hazards associated with lasers, including burns, eye injuries, radiation injuries, and dangerous chemical fumes.

Prerequisite(s): NextGen Accuplacer Reading score of 220+

Lab Fee: \$20.00

Terms Offered: Fall, Spring

### **LMP 1010 Laser Fundamentals (3)**

Contact hours (4 total): 2 lecture, 2 lab

Introduction to the properties and applications of lasers. Fundamental properties of light and optics. Laser mathematical descriptions.

Pre/Corequisite(s): ENT 1050 and LMP 1000

Lab Fee: \$50.00

Terms Offered: Fall, Spring

### **LMP 1020 Laser Electro-Optics and Measurement (3)**

Contact hours (4 total): 2 lecture, 2 lab

Applications of electro-optic systems and photonic sensors; scientific measurement techniques used in these systems.

Pre/Corequisite(s): LMP 1000

Lab Fee: \$30.00

Terms Offered: Fall, Spring

### **LMP 1100 Laser Additive Manufacturing (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Additive manufacturing processes utilizing lasers.  
Utilization of stereolithography, laser powder bed fusion, slicing software, and troubleshooting techniques.  
Pre/Corequisite(s): LMP 1000 and CAD 2100  
Lab Fee: \$75.00  
Terms Offered: Fall

### **LMP 1200 Laser Troubleshooting (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Problem solving skills in laser systems, their auxiliary systems, and laser tool heads.  
Pre/Corequisite(s): LMP 1000  
Lab Fee: \$30.00  
Terms Offered: Fall

### **LMP 1400 Laser Maintenance (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Preventative maintenance in laser systems, their auxiliary systems, and laser tool heads.  
Pre/Corequisite(s): LMP 1000 and LMP 1010  
Lab Fee: \$50.00  
Terms Offered: Fall

### **LMP 1450 Laser Maintenance Documentation (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Best practices in technical writing for maintenance.  
Documentation of problems, solutions, as well as specific site and equipment information.  
Pre/Corequisite(s): LMP 1000 and LMP 1010  
Lab Fee: \$20.00  
Terms Offered: Spring

### **LMP 2100 Laser Machining (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Machining processes utilizing lasers, including cutting, marking, and ablation. Introduction to laser machining concepts and implementation.  
Pre/Corequisite(s): LMP 1000 and LMP 1010  
Lab Fee: \$75.00  
Terms Offered: Spring

### **LMP 2300 Laser Beam Welding (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Welding processes utilizing lasers. Implementation of processes involving stand-alone and hand-held laser machines.  
Pre/Corequisite(s): LMP 1000  
Lab Fee: \$100.00  
Terms Offered: Spring

## **(LPN) PRACTICAL NURSING**

### **LPN 1101 Nursing Fundamentals (9)**

Contact hours (17 total): 5 lecture, 5 lab, 7 clinical  
Practical nurse's role and scope of practice, ethical and legal issues. Health maintenance and promotion. Biological and social sciences. Data collection techniques, nursing process, and medical/surgical asepsis. Basic practical nursing skills and safe medication administration. Introduction to IV therapy. 75 total semester classroom theory hours; 75 total semester lab hours; 105 total semester clinical hours. 180 total lab and clinical hours.  
Prerequisite(s): ENG 1111, BIO 1105, MST 1105, and FYE 1101  
Pre/Corequisite(s): PSY 1111, LPN 1201, and LPN 1301  
Instructor Permission Required.  
Lab Fee: \$583.00  
Student Liability Fee: \$20.00  
Terms Offered: Fall, Spring

### **LPN 1201 Disease Process and Diet Therapy (4)**

Contact hours (4 total): 4 lecture  
Basic principles of microbiology, signs and symptoms of common disease/disorders of body systems, diagnostic tests, treatment and principles of nursing care, and dietary treatment. 60 total semester classroom hours; 0 total semester lab hours; 0 total semester clinical hours.  
Prerequisite(s): BIO 1105, ENG 1111, and MST 1105  
Instructor Permission Required.  
Lab Fee: \$471.00  
Terms Offered: Fall, Spring

### **LPN 1301 Pharmacology (3)**

Contact hours (3 total): 3 lecture  
Systems of measurement and calculation of drug dosage. Principles of pharmacology. Action, prototype drugs, therapeutic implications, side/adverse effects, and associated nursing implication of major drug classes and IV antibiotic administration. Ohio Board of Nursing laws and rules related to LPN practice and IV therapy. 45 total semester classroom theory hours; 0 total semester lab hours; 0 total semester clinical hours.  
Prerequisite(s): BIO 1105, ENG 1111, MST 1105, and MTH 0500  
Pre/Corequisite(s): LPN 1201  
Instructor Permission Required.  
Lab Fee: \$471.00  
Terms Offered: Fall, Spring

### **LPN 1401 Nursing Care of Adults (9)**

Contact hours (17 total): 5 lecture, 1 lab, 11 clinical  
Application of skill competencies from LPN 1101. Intravenous (IV) therapy for the practical nurse. Care of clients with medical and surgical conditions in skilled and hospital settings. Preceptor experience and leadership/management skills. Comprehensive review for National Council Licensure Examination (NCLEX) preparation. 75 total semester classroom hours; 15 total semester lab hours; 165 total semester clinical hours. 180 total lab and clinical hours.  
Prerequisite(s): LPN 1101, LPN 1201, LPN 1301, and PSY 1111  
Pre/Corequisite(s): PSY 2223 and LPN 1501  
Lab Fee: \$531.00  
Student Liability Fee: \$20.00  
Terms Offered: Fall, Spring

## **LPN 1501 Nursing Care of Women, Infants & Children (5)**

Contact hours (7 total): 4 lecture, 2 lab, 1 clinical  
Holistic approach to women's healthcare and its relationship to the childbearing female. Female anatomy and physiology, male reproductive system, fetal growth and development, normal changes of pregnancy, labor and delivery, postpartum, care of the newborn with emphasis on preventing complications. Impact of childbirth and newborn on family unit and current trends in women's health. Family-centered approach to meeting needs of pediatric clients. Application of the nursing process and role of the nurse in the care of the infant/child/adolescent with common diseases, illnesses, and conditions. 60 total semester classroom theory hours; 30 total semester lab hours; 15 total semester clinical hours. 145 total lab and clinical hours.

Prerequisite(s): PSY 1111, LPN 1101, LPN 1301, and LPN 1201

Pre/Corequisite(s): PSY 2223

Lab Fee: \$511.00

Terms Offered: Fall, Spring, Summer

## **(LSC) LOGISTICS AND SUPPLY CHAIN MANAGEMENT**

### **LSC 1100 Introduction to Supply Chain Management (3)**

Contact hours (3 total): 3 lecture

Basic concepts of logistics, warehousing, transportation, purchasing, inventory management, supplier relationships, strategic sourcing, quality process management, globalization, and customer relationship management

Terms Offered: Fall, Spring

### **LSC 2100 Purchasing and Supply Management (3)**

Contact hours (3 total): 3 lecture

Purchasing, materials management, supply chain management, and sourcing management perspectives on the core tasks and challenges required to manage the purchasing function within the context of an integrated supply chain.

Prerequisite(s): MGT 1060 or MGT 1105 or MGT 1120

Terms Offered: Spring

### **LSC 2220 Logistics and Physical Distribution (3)**

Contact hours (3 total): 3 lecture

Design and management of a logistical process of coordinating the flow of goods, services, and information among members of a supply chain with a focus on the area of physical distribution management, including warehouse management and layout, transportation, and customer service.

Prerequisite(s): MGT 1060 or MGT 1105 or MGT 1120

Terms Offered: Fall

### **LSC 2270 Operations Management (3)**

Contact hours (3 total): 3 lecture

Design and management of the models and methods used in operations management including forecasting, system design, quality, supply chain management, project management, and inventory management and scheduling.

Prerequisite(s): MGT 1120 and MTH 1060

Terms Offered: Spring, Summer

## **(MAS) MEDICAL ASSISTING**

### **MAS 1101 Introduction to Administrative and Clinical Medical Assisting (4)**

Contact hours (6 total): 2 lecture, 4 lab

Overview of the role of a medical assistant within the healthcare industry; front office administrative duties, telephone and other electronic communication devices, appointment scheduling, medical records, written communication, filing systems, basic office management skills, accounts receivable procedures, and ethical and legal issues relevant to the medical office employee. Theory components of clinical assisting procedures in the medical office; clinical knowledge, behavior expected of the medical assistant including therapeutic and professional communication, patient history and physical exam, anthropometric measures and vital signs, infection control, medical and surgical asepsis, diagnostic imaging, pediatrics, obstetrics/gynecology, and gerontology.

Pre/Corequisite(s): BIO 1105, ENG 1111, MST 1101, and MST 1105

Lab Fee: \$115.00

Terms Offered: Fall, Spring

### **MAS 1104 Exam Room Procedures I (2)**

Contact hours (4 total): 1 lecture, 3 lab

Clinical knowledge, skills, and behaviors expected of medical assistant including therapeutic and professional communication, patient history and exam, anthropometric measures and vital signs, infection control, medical and surgical asepsis, safety and emergency practices, and coping skills. Specialties of pediatrics, otolaryngology, ophthalmology, orthopedics, and dermatology.

Pre/Corequisite(s): BIO 1105 and MST 1105

Instructor Permission Required.

Lab Fee: \$75.00

Terms Offered: Fall, Spring

### **MAS 1105 Administrative Medical Assisting II (3)**

Contact hours (5 total): 2 lecture, 3 lab

Financial aspects of the office, ICD-10 and CPT coding, managed care, medical insurance, reimbursement procedures, and managing patient accounts. Professional etiquette and job search skills.

Prerequisite(s): MAS 1101

Instructor Permission Required.

Lab Fee: \$40.00

Terms Offered: Spring, Summer

### **MAS 1106 Clinical Medical Assisting II (3)**

Contact hours (5 total): 2 lecture, 3 lab

Medication administration and medical office emergencies. Review ECG skills. Specialties of pediatrics, obstetrics and gynecology, otolaryngology, ophthalmology, orthopedics, cardiology, pulmonary medicine, urology, gastroenterology, and dermatology.

Prerequisite(s): MAS 1101

Pre/Corequisite(s): MAS 1112

Instructor Permission Required.

Lab Fee: \$75.00

Terms Offered: Fall, Spring

### **MAS 1112 Pharmacology for the Medical Office (3)**

Contact hours (3 total): 3 lecture

Principles of pharmacology for the medical assistant: sources of drugs, drug classifications, actions, and interactions. Dosage calculations.

Prerequisite(s): MTH 0500 with a grade of C or higher

Instructor Permission Required.

Terms Offered: Spring, Summer

### **MAS 1115 Laboratory Procedures for the Medical Office (2)**

Contact hours (3 total): 1 lecture, 2 lab

Diagnostic physician office laboratory procedures: collection and processing of specimens, laboratory safety, microbiology, urinalysis, hematology, serology, and blood chemistry.

Prerequisite(s): MAS 1101

Pre/Corequisite(s): MST 1160 and MST 1161

Lab Fee: \$75.00

Terms Offered: Fall, Spring

### **MAS 1117 Medical Assisting Directed Practice (2)**

Integration of content and competencies covered in the Medical Assistant certificate program. Two hundred (200), supervised clinical hours.

Prerequisite(s): MST 1171, MST 1160, MST 1161, MAS 1105, MAS 1106, MAS 1112, and MAS 1115

Pre/Corequisite(s): PSY 1111

Corequisite(s): MAS 1118

Student Liability Fee: \$20.00

Terms Offered: Spring, Summer

### **MAS 1118 Clinical Perspectives Seminar (1)**

Contact hours (1 total): 1 lecture

Forum for shared learning and problem solving of directed practice experiences.

Prerequisite(s): MST 1171, MST 1160, MST 1161, MAS 1105, MAS 1106, MAS 1112, and MAS 1115

Pre/Corequisite(s): PSY 1111

Corequisite(s): MAS 1117

Terms Offered: Spring, Summer

### **MAS 2100 Medical Assisting Certification Review (2)**

Contact hours (2 total): 2 lecture

Preparation for the American Association of Medical Assistants (AAMA) national certification examination.

Prerequisite(s): MST 1171, MST 1160, MST 1161, MAS 1105, MAS 1106, MAS 1112, and MAS 1115

Certification Fee: \$160.00

Terms Offered: Fall, Summer

## **(MGT) MANAGEMENT**

### **MGT 1060 Organizational Behavior (3)**

Contact hours (3 total): 3 lecture

Theories, concepts, and applications of organizational behavior as it relates to individuals, groups, and organizations in today's global business environment. Conceptual frameworks, case discussions, and skill-oriented activities. Personality, assessment of self, motivation, stress, job success, ethics, conflict resolution, managing change, group behavior, team problem solving and decision making, interpersonal and organizational communication.

Pre/Corequisite(s): ENG 1111

Terms Offered: Fall, Spring, Summer

### **MGT 1100 Personal Finance (3)**

Contact hours (3 total): 3 lecture

Financial decision-making in personal budgeting, credit, insurance, medical care, investment, home ownership, retirement planning, and income taxes

Prerequisite(s): NextGen Accuplacer Reading score of 220+

Terms Offered: Fall, Spring

### **MGT 1105 Introduction to Business (2)**

Contact hours (2 total): 2 lecture

Current concepts of American business encompassing social and ethical responsibilities, global markets, government regulation, and taxation. Forms of business, administration, management, organized labor, and other basic business concepts.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring, Summer

### **MGT 1115 Customer Relations (2)**

Contact hours (2 total): 2 lecture

Principles and techniques of customer service.

Examination of communication, customer service behaviors, customer relationships, service breakdown and recovery, customer loyalty, and customer service in a diverse world.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring, Summer

### **MGT 1120 Principles of Management (3)**

Contact hours (3 total): 3 lecture

This course examines theories and applications of management and organizational behavior with an emphasis on the interaction among individuals, teams, and organizations that impact performance. This course prepares students to succeed in dynamic, diverse organizational environments.

Pre/Corequisite(s): ENG 1111

Terms Offered: Fall, Spring, Summer

### **MGT 1500 Lean Six Sigma Yellow Belt / Problem Solving for Team Members (1)**

Contact hours (1 total): 1 lecture

Prepares students for workplace employment. Basic knowledge and skills to be an effective team member on a problem solving team. Participants will use the 5 step problem solving process called DMAIC (Define, Measure, Analyze, Improve, Control) at Team Member level. Lean Six Sigma Yellow Belt is a nationally recognized Certification. This course must be taught by an instructor who is a Certified Master Black Belt. This course is be taught by an instructor who is a certified Master Black Belt or by an instructor certified as an Education Six Sigma Black Belt trainer. Instructor Permission Required.

Terms Offered: Fall, Spring

### **MGT 1510 Lean Six Sigma Green Belt / Problem Solving for Team Leaders (3)**

Contact hours (3 total): 3 lecture

Building on the knowledge gained in the Lean Six Sigma Yellow Belt Team Member Course, this course, prepares students for workplace employment. Students who complete this course are prepared for supervisory/management positions as a problem solving Team Leader. Participants will use the 5 step problem solving process called (DMAIC) Define, Measure, Analyze, Improve, Control at Team Leadership level. Lean Six Sigma Green Belt is a nationally recognized Certification. This course is be taught by an instructor who is a certified Master Black Belt or by an instructor certified as an Education Six Sigma Black Belt trainer.

Prerequisite(s): MGT 1500

Instructor Permission Required.

Terms Offered: Fall, Spring



### **MGT 2000 Introduction to Project Management (3)**

Contact hours (3 total): 3 lecture

Description: Business, interpersonal, and technical skills required to successfully manage business and system development projects. Project integration. Scope, time, cost, quality, human resource, communications, risk, and procurement management. Use of Windows PC is required.

Terms Offered: Fall, Spring

### **MGT 2020 Quality Management (3)**

Contact hours (3 total): 3 lecture

Customer satisfaction and quality management through employee involvement. Continuous process improvement, performance measures, Statistical Process Control (SPC), ISO9000, benchmarking, and the use of various management tools used for managing quality.

Prerequisite(s): MGT 1060 or MGT 1105 or MGT 1120

Terms Offered: Fall, Spring

### **MGT 2140 Small Business Management (3)**

Contact hours (3 total): 3 lecture

Small business and entrepreneurship. Decision for self-employment through small business opportunities; business planning, financing, marketing, and management. Integration of functional business courses into a balanced overview of entrepreneurship. Application through activities and projects.

Prerequisite(s): ACC 1100 and (MGT 1105 or MGT 1120)

Terms Offered: Spring

### **MGT 2270 Business Finance (3)**

Contact hours (3 total): 3 lecture

Theory, methods, and concerns of corporate finance, elements of financial planning, capital management techniques, valuation, cost of capital, capital budgeting, ratio analysis, leverage, and diversification through mergers.

Prerequisite(s): ACC 1100

Terms Offered: Fall, Spring, Summer

### **MGT 2450 Data Analytics (3)**

Contact hours (4 total): 2 lecture, 2 lab

Data mining, analysis, and reporting. Interpretation of results using examples from various industries.

Prerequisite(s): [MTH 0500 with a C or higher, or MTH 1060, or MTH 1200] and [AGR 1100 or ITS 1105 or (ITS 1235 and ITS 1245)]

Terms Offered: Fall, Spring

### **MGT 2600 Legal Environment of Business (3)**

Contact hours (3 total): 3 lecture

History of the law, law of contracts, agency, sales, and personal property. The law of negotiable instruments, partnership, corporations, and real property.

Pre/Corequisite(s): ENG 1112 or ENG 2211

Terms Offered: Fall, Spring, Summer

### **MGT 2650 Negotiation Skills (3)**

Contact hours (3 total): 3 lecture

Psychology and techniques of conducting purchasing and other types of business negotiations; mock negotiations using case studies. Principles apply to situations in personal life.

Prerequisite(s): MGT 1060, MGT 1105, or MGT 1120

Terms Offered: Spring

### **MGT 2680 Introduction to International Business (3)**

Contact hours (3 total): 3 lecture

Global dimensions of business; an overview of theories and institutions of trade, investment, and management emphasizing the managerial perspective on issues arising from international business and worldwide operations.

Prerequisite(s): MGT 1060, MGT 1105, or MGT 1120

Global Awareness.

Terms Offered: Spring

### **MGT 2800 Business Strategy/Policy Seminar (Capstone) (3)**

Contact hours (3 total): 3 lecture

Development of business strategy and policy and the integration of skills learned in prior management study, including strategy formulation, implementation, and evaluation. Coordination of management, economics, marketing, operations management, financial accounting, legal environment and ethics, and social responsibility to achieve competitive advantage. Students must have a minimum of 45 semester credit hours.

Prerequisite(s): MGT 1120, MKT 2000, and Students must have a minimum of 45 semester credit hours

Terms Offered: Fall, Spring

## **(MKT) MARKETING**

### **MKT 2000 Marketing Management (3)**

Contact hours (3 total): 3 lecture

Management of the marketing functions in various business contexts. Marketing activities, analysis, strategies, and decision making in the context of other business functions. Integration of product, price, promotion, and distribution activities; research and analysis of markets, environments, competition, and customers; market segmentation and selection of target markets; and emphasis on behavior and perspectives of consumers and organizational customers. Planning and decision making for products and services in profit and nonprofit, domestic, and global settings. [Note: In programs not requiring ECO 2220, students will need instructor permission.]

Pre/Corequisite(s): ECO 2220 or instructor permission

Global Awareness.

Terms Offered: Fall, Spring, Summer

### **MKT 2150 Product Management (3)**

Contact hours (3 total): 3 lecture

Overview of product management and the product development process. Overview of a product manager's tasks of market analysis, strategy development, and decision making regarding pricing, advertising, promotion, and distribution.

Prerequisite(s): MKT 2000 and MGT 1120

Terms Offered: Spring

### **MKT 2400 Electronic Business Applications (3)**

Contact hours (3 total): 3 lecture

Electronic business and the unique requirements of conducting business on the Internet. Application of electronic business techniques and tools. Management issues of electronic commerce. Legal, ethical, social responsibility issues.

Prerequisite(s): (MGT 1105 or MGT 1120) and (ITS 1100 or ITS 1105)

Global Awareness.

Terms Offered: Spring



### **MKT 2450 Sales and Sales Management (3)**

Contact hours (3 total): 3 lecture

Role of selling in our economy. Psychology of selling, sales process, motivation of the salesperson. Fundamentals and techniques of selling in relation to various types of goods and services.

Prerequisite(s): MKT 2000 or MGT 1120 or Pre/co-req: AGR 2700

Terms Offered: Spring

### **MKT 2550 Promotion & IMC Strategies (3)**

Contact hours (3 total): 3 lecture

Integrated marketing communication systems, and its tools for communication with internal and external customers, promotion and integrated communication strategies and techniques.

Prerequisite(s): MKT 2000

Terms Offered: Fall

## **(MLT) MEDICAL LABORATORY TECHNOLOGY**

### **MLT 1120 Introduction to Medical Laboratory Science (2)**

Contact hours (2 total): 2 lecture

History, role, and professional responsibilities of the medical laboratory technician. Organization of the medical laboratory. Medical terminology. Comprehensive background in the theory and principles of phlebotomy. Quality assurance and total quality management. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): ENG 0850 with a grade of A, ENG 0900 with a grade of C or higher, and MTH 0650 with a grade of C or higher

Corequisite(s): MLT 1125

Instructor Permission Required.

Terms Offered: Fall

### **MLT 1125 Introduction to Medical Laboratory Science Laboratory (1)**

Contact hours (3 total): 3 lab

Principles of medical laboratory instrumentation. Use and care of medical laboratory instruments. Medical Laboratory Safety. Up-to-date instruction in phlebotomy procedures. Quality assurance and total quality management for laboratory practice.

Prerequisite(s): ENG 0850 with a grade of A, ENG 0900 with a grade of C or higher, and MTH 0500

Corequisite(s): MLT 1120

Instructor Permission Required.

Lab Fee: \$100.00

Terms Offered: Fall

### **MLT 1130 Clinical Chemistry (3)**

Contact hours (3 total): 3 lecture

Organic chemistry: hydrocarbons (saturated and unsaturated), alcohols, aldehydes, ketones, and carbohydrates. Principles, procedures, quality assurance, and clinical significance of quantitative chemical analysis of body fluids, carbohydrates, lipids, proteins, electrolytes, endogenous toxic substances, blood gases, pH, enzymes, vitamins, hormones, and exogenous toxic substances.

Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): CHM 1150, MLT 1120, MLT 1125, MLT 1160, and MLT 1165

Corequisite(s): MLT 1135

Terms Offered: Spring

### **MLT 1135 Clinical Chemistry Lab (2)**

Contact hours (6 total): 6 lab

Qualitative chemical analysis of body fluids, carbohydrates, lipids, proteins, electrolytes, endogenous toxic substances, blood gases, pH, enzymes, vitamins, hormones, and exogenous toxic substances.

Prerequisite(s): CHM 1150, MLT 1120, MLT 1125, MLT 1160, and MLT 1165

Corequisite(s): MLT 1130

Lab Fee: \$125.00

Terms Offered: Spring

### **MLT 1140 Medical Microbiology I (2)**

Contact hours (2 total): 2 lecture

Identification of bacteria by microscope, media, inoculation, biochemical activities, and sensitivity testing. Basic disease processes. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): MLT 1120, MLT 1125, MLT 1160, and MLT 1165

Corequisite(s): MLT 1145

Terms Offered: Spring

### **MLT 1145 Medical Microbiology I Lab (2)**

Contact hours (6 total): 6 lab

Basic microbiology concepts. Identification of bacteria by microscope, media, inoculation, biochemical activities, and sensitivity testing.

Prerequisite(s): MLT 1120, MLT 1125, MLT 1160, and MLT 1165

Corequisite(s): MLT 1140

Lab Fee: \$130.00

Terms Offered: Spring

### **MLT 1150 Hematology I (2)**

Contact hours (2 total): 2 lecture

The origin, formation, and purpose of the formed elements of the blood, differential morphology, and staining techniques. Quality control. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): MLT 1130, MLT 1135, MLT 1140, MLT 1145, MLT 2130, and MLT 2135

Corequisite(s): MLT 1155

Terms Offered: Fall

### **MLT 1155 Hematology I Laboratory (2)**

Contact hours (6 total): 6 lab

Manual and automated hematology instrumentation techniques and principles of counting erythrocytes, leukocytes, and thrombocytes; determination of red blood cell indices. Quality control.

Prerequisite(s): MLT 1130, MLT 1135, MLT 1140, MLT 1145, MLT 2130, and MLT 2135

Corequisite(s): MLT 1150

Lab Fee: \$100.00

Terms Offered: Fall

### **MLT 1160 Urinalysis & Body Fluids (2)**

Contact hours (2 total): 2 lecture

Urinalysis principles including physical and chemical characteristics and microscopic analysis of urinary sediment. Body fluids: synovial, cerebrospinal, serous, amniotic, and seminal fluids. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): Acceptance to Medical Laboratory Technology program

Corequisite(s): MLT 1165

Instructor Permission Required.

Terms Offered: Fall

### **MLT 1165 Urinalysis & Body Fluids Laboratory (1)**

Contact hours (3 total): 3 lab

Basic urinalysis techniques including physical and chemical characteristics and microscopic analysis of urinary sediment. Basic technique for synovial, cerebrospinal, serous, amniotic, and seminal fluids.

Prerequisite(s): Acceptance to Medical Laboratory Technology program

Corequisite(s): MLT 1160

Instructor Permission Required.

Lab Fee: \$100.00

Terms Offered: Fall

### **MLT 2122 Immunology & Blood Banking (3)**

Contact hours (3 total): 3 lecture

Principles and theories of the production and characteristics of antigen-antibody reactions, formation, and reactions of antigens and antibodies. Responsibility of blood bank procedures, blood collection, and processing. Genotypes and phenotypes of ABO and Rh blood group systems. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): MLT 1130, MLT 1135, MLT 1140, MLT 1145, MLT 2130, and MLT 2135

Corequisite(s): MLT 2125

Terms Offered: Fall

### **MLT 2125 Immunology & Blood Banking Lab (4)**

Contact hours (12 total): 12 lab

Techniques of agglutination, precipitation, flocculation, immunodiffusion, immunofluorescence, ELISA (Enzyme-linked immunosorbent assay), and EIA (Enzyme immunoassay). Typing techniques, principles, procedures; crossmatch and panel screening; atypical antibody identification and quality control.

Prerequisite(s): MLT 1130, MLT 1135, MLT 1140, MLT 1145, MLT 2130, and MLT 2135

Corequisite(s): MLT 2122

Lab Fee: \$185.00

Terms Offered: Fall

### **MLT 2130 Medical Microbiology II (2)**

Contact hours (2 total): 2 lecture

Identification of microbial agents associated with disease in man including bacteria, viruses, and parasites. Specimen collection. Quality control. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): MLT 1120, MLT 1125, MLT 1160, and MLT 1165

Corequisite(s): MLT 2135

Terms Offered: Spring

### **MLT 2135 Medical Microbiology II Lab (2)**

Contact hours (6 total): 6 lab

Techniques to isolate, identify, and evaluate the presence of clinically significant microorganisms.

Prerequisite(s): MLT 1120, MLT 1125, MLT 1160, and MLT 1165

Corequisite(s): MLT 2130

Lab Fee: \$175.00

Terms Offered: Spring

### **MLT 2140 Hematology II (2)**

Contact hours (2 total): 2 lecture

Disorders of blood cells and platelets including biochemistry of the red blood cell, anemias, leukemias. Principles and procedures of coagulation. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): MLT 1130, MLT 1135, MLT 1140, MLT 1145, MLT 2130, and MLT 2135

Corequisite(s): MLT 2145

Terms Offered: Fall

### **MLT 2145 Hematology II Lab (2)**

Contact hours (6 total): 6 lab

Manual and automated instrumentation techniques used within a hematology department. Differential counting of abnormal cells. Coagulation.

Prerequisite(s): MLT 1130, MLT 1135, MLT 1140, MLT 1145, MLT 2130, and MLT 2135

Corequisite(s): MLT 2140

Lab Fee: \$120.00

Terms Offered: Fall

### **MLT 2156 Directed Practice /Seminar (5)**

Four hundred (400) hours at assigned clinical site; departmental rotation; application of principles and techniques under supervision of clinical staff and college faculty. Includes directed reflection on the clinical experience.

Prerequisite(s): MLT 1150, MLT 1155, MLT 2140, MLT 2145, MLT 2122, and MLT 2125

Corequisite(s): MLT 2160

Student Liability Fee: \$20.00

Other Fee: \$100.00

Terms Offered: Spring

### **MLT 2160 MLT Review and Update (2)**

Contact hours (2 total): 2 lecture

Review and update of urinalysis, hematology, clinical chemistry, medical microbiology, immunology, immunohematology. Note: The online sections require that exams be taken at approved proctoring sites.

Prerequisite(s): MLT 1150, MLT 1155, MLT 2140, MLT 2145, MLT 2122, and MLT 2125

Corequisite(s): MLT 2156

Terms Offered: Spring

## **(MSE) MODELING AND SIMULATION ENGINEERING**

### **MSE 1000 Systems Engineering I (3)**

Contact hours (4 total): 2 lecture, 2 lab

Needs, requirements, and functional analyses.

Requirements evaluation and selection, concept exploration, systems architecting, model-based systems engineering, decision analysis and support, and risk management.

Prerequisite(s): NextGen Accuplacer score of Reading 220+ and Math 220+

Terms Offered: Fall

### **MSE 1050 Systems Engineering II (3)**

Contact hours (4 total): 2 lecture, 2 lab

Advanced development, software systems engineering, engineering design, and systems integration. Test and evaluation, production, operation and support. System of systems engineering, enterprise systems engineering, systems security engineering, and future of systems engineering.

Prerequisite(s): MSE 1000

Terms Offered: Spring

### **MSE 1500 Simulation Modeling with Python (4)**

Contact hours (5 total): 3 lecture, 2 lab

Numerical simulation foundations. Randomness and random numbers, probability and data generation processes, modeling algorithms and techniques. Monte Carlo simulations, simulation-based Markov decision processes, resampling methods, systems optimization, evolutionary systems, and applications.

Prerequisite(s): MSE 1000 and CSD 1510

Terms Offered: Spring

### **MSE 2000 Engineering Design of Systems I (3)**

Contact hours (4 total): 2 lecture, 2 lab

Systems engineering foundations and systems modeling language (SysML). Sets, relations, functions, graphs, and digraphs. Requirements and definition of the design problem. Functional, physical, and allocated architecture development.

Prerequisite(s): MSE 1050

Terms Offered: Fall

### **MSE 2050 Engineering Design of Systems II (3)**

Contact hours (4 total): 2 lecture, 2 lab

Integration and qualification, systems engineering process management, graphical modeling techniques, decision analysis for design trades, systems engineering documents, models of methods, and integrated definition of system models.

Prerequisite(s): MSE 2000

Terms Offered: Spring

### **MSE 2100 Human Factors Engineering (3)**

Contact hours (4 total): 2 lecture, 2 lab

Design methods, evaluation methods, human sensory system, input devices, and cognition. Decision making and macrocognition, human memory, human-computer interaction (HCI), and human-automation interaction. Usability, displays, controls, stress, and workload. Safety and accident prevention.

Prerequisite(s): MSE 1050

Terms Offered: Spring

### **MSE 2200 MATLAB Applications (3)**

Contact hours (4 total): 2 lecture, 2 lab

Activation, arrays creation, arrays mathematical operations, script files, data management, 2D and 3D plots, programming, user-defined functions, and function files. Polynomials, curve fitting, and interpolation. Numerical analysis applications, and symbolic math.

Prerequisite(s): MSE 1500

Terms Offered: Spring

### **MSE 2500 Machine Learning (3)**

Contact hours (4 total): 2 lecture, 2 lab

Feature and model types, training dates, classification and regression models. Model evaluation, validation, and hyperparameter tuning. Support vector machines, neural networks, and k-means. Decision trees, ensemble models, clustering, dimensionality reduction, and unlabeled data.

Prerequisite(s): MSE 1500

Terms Offered: Spring

## **(MST) MULTI-SKILLED HEALTH CARE**

### **MST 1101 Introduction to Health Care (3)**

Contact hours (3 total): 3 lecture

History of health care delivery systems, current systems, services, trends and challenges, health care careers, and ethical and legal responsibilities. Foundational concepts of patient care including human growth and development, basic human needs, patient rights and responsibilities, provider and patient safety, communication skills, and computer literacy. Professionalism and securing and maintaining employment.

Prerequisite(s): ENG 0980 or ENG 1111

Terms Offered: Fall, Spring, Summer

### **MST 1105 Medical Terminology (2)**

Contact hours (2 total): 2 lecture

Language of medicine. Medical prefixes, suffixes, root words, singular/plural forms constructed to form medical terminology. Definition, spelling, and pronunciation of terms related to organization of the body, body systems, pathology, diagnostic and treatment procedures, pharmacology and medical specialists. Standard medical abbreviations. TAG OHL020 approved course.

Pre/Corequisite(s): ENG 0980 or ENG 1111

Terms Offered: Fall, Spring, Summer

### **MST 1140 Human Disease (3)**

Contact hours (3 total): 3 lecture

Basic concepts of pathophysiology. Pathophysiological processes, clinical manifestations, and diagnostic and therapeutic management of common disorders and diseases of major body systems.

Prerequisite(s): MST 1105 and BIO 1105 or BIO 2122

Terms Offered: Fall, Spring, Summer

### **MST 1160 Phlebotomy (2)**

Contact hours (2 total): 2 lecture

Comprehensive background in the theory and principles of phlebotomy. Quality assurance and total quality management.

Prerequisite(s): ENG 0980 or ENG 1111

Corequisite(s): MST 1161

Terms Offered: Fall, Spring, Summer

### **MST 1161 Phlebotomy Lab (1)**

Contact hours (2 total): 2 lab

Application of principles of phlebotomy. Performance of phlebotomy procedures.

Prerequisite(s): ENG 0980 or ENG 1111

Corequisite(s): MST 1160

Lab Fee: \$50.00

Terms Offered: Fall, Spring, Summer

### **MST 1171 Introduction to Electrocardiography (2)**

Contact hours (2.5 total): 1.5 lecture, 1 lab

Principles of electrocardiography (ECG) including basic cardiac anatomy and physiology, basic ECG interpretation, and identification of common abnormal tracings. Recording of rhythm strips and multi-lead ECGs. Equipment operation and troubleshooting.

Pre/Corequisite(s): BIO 1105 or BIO 2122 and MST 1105

Lab Fee: \$20.00

Terms Offered: Fall, Spring, Summer

### **MST 1181 Nurse Aide Training (4)**

Contact hours (6 total): 3 lecture, 2 lab, 1 clinical

Introduction to basic patient/resident care. Classroom, skills lab practice, and clinical experiences. Successful completion meets the requirements to apply for the Ohio Nurse Aide State Test.

Pre/Corequisite(s): ENG 0980

Corequisite(s): Criminal background check

Lab Fee: \$27.50

Student Liability Fee: \$20.00

Other Fee: \$24.00

Terms Offered: Fall, Spring, Summer

## (MTH) MATH

### MTH 0500 Pre-Algebra (4)

Contact hours (4 total): 4 lecture

Topics include whole numbers; mixed numbers; fractions; decimals; percentages; ratios and proportions; operations with the metric system; operations with integers; solving linear equations; solving literal equations; and solving linear inequalities. Institutional credit only.

Prerequisite(s): Accuplacer score of reading 220+ and math 220+

Pre/Corequisite(s): AGR 1100, ENT 1000, or FYE 1101

Terms Offered: Fall, Spring, Summer

### MTH 0550 Foundation of Statistics (2)

Contact hours (2 total): 2 lecture

Topics include operations with signed numbers; evaluating algebraic expressions; exponents and square roots; basic statistical calculations; converting between fractions, decimals, and percents; solving linear equations; summation notation; Venn diagrams; interval and set notation; rectangular coordinate system; and graphing linear equations. Institutional credit only.

Prerequisite(s): MTH 0500 with a grade of C or higher

Pre/Corequisite(s): AGR 1100, ENT 1000, or FYE 1101

Corequisite(s): STT 2640

Terms Offered: Fall, Spring, Summer

### MTH 0570 Foundations of Quantitative Reasoning (2)

Contact hours (2 total): 2 lecture

Operations with signed numbers; evaluating algebraic expressions; proportions and ratios; converting between fractions, decimals, and percentages; solving linear equations; graphing linear equations; interpreting graphical displays of data; solving basic probability problems. Institutional credit only.

Prerequisite(s): MTH 0500 with a grade of C or higher

Pre/Corequisite(s): FYE 1101

Corequisite(s): MTH 1070

Terms Offered: Fall, Spring, Summer

### MTH 0750 Algebra for STEM Majors (5)

Contact hours (5 total): 5 lecture

Topics include solving various types of word problems; operations on polynomials including factoring; operations on rational expressions; solving equations containing rational expressions; graphs of points and lines; linear systems with two variables; positive, negative, and fractional exponents; scientific notation; operations with radicals; solving quadratic equations; and an introduction to functions and graphing. Institutional credit only.

Prerequisite(s): MTH 0500 with a grade of C or higher

Pre/Corequisite(s): AGR 1100, ENT 1000, or FYE 1101

Terms Offered: Fall, Spring, Summer

### MTH 1060 Business Mathematics (3)

Contact hours (3 total): 3 lecture

Application of fundamental problem solving concepts, techniques, and skills relating to the quantitative aspects of business. Topics covered include bank reconciliations, percentages, simple and compound interest, depreciation, markups and markdowns, trade and cash discounts, sales and property taxes, promissory notes, insurance, loan amortization, mortgages, and business statistics.

Pre/Corequisite(s): ENG 0980 grade of C or greater;

NextGen Accuplacer math score of 220 or greater

Terms Offered: Fall, Spring, Summer

### MTH 1070 Quantitative Reasoning (3)

Contact hours (3 total): 3 lecture

Real world mathematical models and decision making for percentages, managing money, statistical literacy, variation, linear and exponential growth and decay, proportion, and voting methods. [Note: Online sections require that exams be taken at an approved proctoring site.]

Prerequisite(s): MTH 0570 or MTH 0750 with a grade of C or higher

Pre/Corequisite(s): MTH 0570, if a grade of C or higher has not been earned in MTH 0750, and ENG 0980 with a grade of C or higher.

Terms Offered: Fall, Spring, Summer

### MTH 1115 Industrial Calculations (3)

Contact hours (4 total): 2 lecture, 2 lab

Application of mathematical concepts to the design and maintenance of products and processes. Basic concepts in measurement and geometry. Presenting and analyzing data using charts, graphs, algebraic equations, vector diagrams, statistical calculations, and trigonometric relationships.

Prerequisite(s): ENT 1050 or MTH 0750

Terms Offered: Fall, Spring, Summer

### MTH 1200 Technical Math for Agriculture (3)

Contact hours (3 total): 3 lecture

Development and application of practical mathematical principles in agriculture including algebra, geometry, and trigonometry fundamentals with emphasis on applications involving equations, percents, measurements, graphing, and problem solving techniques.

Prerequisite(s): MTH 0750 with a grade of C or higher

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Spring

### MTH 1280 College Algebra (4)

Contact hours (4 total): 4 lecture

Analysis of functions and their graphs, including linear, quadratic, higher-order polynomial, rational, radical, exponential, logarithmic, absolute value, and general piecewise-defined functions. Transformations and combinations of functions, inverse functions. Equations, inequalities, and systems of equations. Applications, modeling, and use of a graphing utility. [Note: Online sections require that exams be taken at an approved proctoring site.]

Prerequisite(s): MTH 0750 with a grade of C or higher

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring, Summer

### MTH 1340 Pre-Calculus (5)

Contact hours (5 total): 5 lecture

Analysis of functions and their graphs, including linear, quadratic, higher-order polynomial, rational, radical, exponential, logarithmic, trigonometric, inverse trigonometric, absolute value, and general piecewise-defined functions. Transformations and combinations of functions, inverse functions. Equations, inequalities, and systems of equations. Analytic trigonometry, conics, sequences, and series. Applications, modeling, and use of a graphing utility. [Note: Online sections require that exams be taken at an approved proctoring site.]

Prerequisite(s): MTH 1280 with a grade of C or higher

Terms Offered: Fall, Spring, Summer



## **MTH 2100 Calculus for the Management, Life and Social Sciences (5)**

Contact hours (5 total): 5 lecture

Functions; limits; derivatives of polynomial, exponential, and logarithmic functions; integrals of polynomial, exponential, and logarithmic functions; maxima and minima; applications appropriate to biology, medicine, business, economics, social, and behavioral sciences.

Prerequisite(s): MTH 1280 with a grade of C or higher

Terms Offered: Spring

## **MTH 2200 Calculus I (5)**

Contact hours (5 total): 5 lecture

Limits, derivatives, and integrals of functions of a single variable. Continuity, rules of differentiation; derivatives of trigonometric, inverse trigonometric, exponential, and logarithmic functions; higher derivatives, implicit differentiation, related rates, linear approximation, differentials, Mean Value Theorem, extrema, concavity, optimization, curve sketching, antiderivatives, area, definite integrals, Fundamental Theorem of Calculus, indefinite integrals, Net Change Theorem, integration by substitution, area between curves.

Prerequisite(s): MTH 1340 with a grade of C or higher

Terms Offered: Fall, Spring

## **MTH 2220 Calculus II (5)**

Contact hours (5 total): 5 lecture

Applications of integrals in geometry and physics; techniques of integration and approximate integration; indeterminate forms and L'Hopital's Rule; improper integrals; parametric and polar curves and their calculus; separable equations, exponential growth and decay; sequences and series; tests for convergence, power series, Taylor series.

Prerequisite(s): MTH 2200 with a grade of C or higher

Terms Offered: Spring, Summer

## **MTH 2242 Multivariable Calculus (5)**

Contact hours (5 total): 5 lecture

Three-dimensional coordinate systems, surfaces, vector algebra, lines and planes in space; calculus of vector-valued functions; limits, continuity, and derivatives of functions of several variables; multiple integrals in various coordinate systems; vector fields, line integrals, the Fundamental Theorem for line integrals, Green's Theorem, surface integrals, Stokes' Theorem, and the Divergence Theorem; applications.

Prerequisite(s): MTH 2220 with a grade of C or higher

Terms Offered: Fall

## **MTH 3000 Math for Manufacturing Technology (4)**

Contact hours (5 total): 3 lecture, 2 lab

Integration and application of statistics, statistical analysis, geometry, trigonometry, and algebra. Applications in business, manufacturing, and engineering. Use of an integrated teaching model, (I-BEST) with manufacturing and business management faculty.

Prerequisite(s): MTH 1340

Lab Fee: \$50.00

Terms Offered: Spring

# **(MTM) MANUFACTURING TECHNOLOGY MANAGEMENT**

## **MTM 3000 Technical Manufacturing Skills for Management I (5)**

Contact hours (7 total): 3 lecture, 4 lab

Foundational skills in areas of manufacturing technology. Serve as team leader in various manufacturing environments. Technical knowledge and higher-level skills in the following areas: welding, robotics, mechanical and electrical systems, preventive maintenance and troubleshooting. Leadership skills within the context of a manufacturing environment are emphasized. Use of an integrated teaching model, (I-Best) with manufacturing and business management faculty.

Prerequisite(s): ENT 2600 or Instructor Approval

Lab Fee: \$50.00

Terms Offered: Fall

## **MTM 3100 Technical Manufacturing Skills for Management II (5)**

Contact hours (7 total): 3 lecture, 4 lab

Emphasis on project management; development of higher level skills in communication through project management, meeting facilitation, development of Gantt charts, timelines, and project outcomes. Manufacturing technology skills which include: computer numerical control, computer-aided design, and additive manufacturing. Concepts in design and modeling, part documentation, production, and part verification. Use of an integrated teaching model, (I-BEST) with manufacturing and business management faculty.

Prerequisite(s): MTM 3000

Lab Fee: \$50.00

Terms Offered: Fall

## **MTM 3200 Integrative Manufacturing Technology (4)**

Contact hours (6 total): 2 lecture, 4 lab

Advanced technical skills embedded into manufacturing projects. Concepts in automation, programming, and lean manufacturing covered. Design, construct, and operate an automated work cell. Create project proposals, troubleshoot issues, and resolve conflict in teams. Collaborate with local employers on projects. Use of an integrated teaching model (I-Best) with manufacturing and business management faculty.

Prerequisite(s): MTM 3100

Lab Fee: \$50.00

Terms Offered: Spring

## **MTM 3300 Quality Management Systems in Manufacturing (4)**

Contact hours (6 total): 2 lecture, 4 lab

Fundamentals of quality systems. Practical relationships between current production methods and quality systems. Focus on process improvement. Best practices of high-performing quality organizations. Implement continuous improvement in manufacturing processes. Quality validation. Overview of International Organization for Standardization (ISO) certification process. ISO 9001:2015 standard. Use of an integrated teaching model (I-Best) with manufacturing and business management faculty.

Prerequisite(s): MTM 3100

Lab Fee: \$50.00

Terms Offered: Spring



### **MTM 3400 OSHA 30-Hour General Safety (3)**

Contact hours (3 total): 3 lecture  
Comprehensive safety program designed for general industry including directors, foremen, and field supervisors. Employee rights, employer responsibilities, and how to identify, abate, avoid and prevent job related hazards. 30 Hour OSHA card received upon successful completion.  
Prerequisite(s): MTM 3100  
Certification Fee: \$115.00  
Terms Offered: Fall, Spring, Summer

### **MTM 4000 Real World Applications in Manufacturing (3)**

Contact hours (3 total): 3 lecture  
Co-op work experience. Minimum of 300 hours at a manufacturing company. Work plan and goal development between student and employer. Oral and written reports. Topics including business etiquette, writing, presentation, and supervisory skills.  
Prerequisite(s): MTM 3200, successful completion of a previous co-op, and approved co-op placement Instructor Permission Required.  
Lab Fee: \$50.00  
Terms Offered: Fall

### **MTM 4100 Technical Communications (3)**

Contact hours (3 total): 3 lecture  
Produce oral and written scientific and technical information for executives and shop floor technicians. Include formal reports, proper use of technology for relaying complex information, formats for ISO documents and procedures and other quality assurance documents. Focused on the writing process: clear, accurate, and professional communication essential to organization management. Write effectively in terms of specified audiences. Use of an integrated teaching model (I-Best) with manufacturing and business management faculty.  
Prerequisite(s): ENG 1111  
Pre/Corequisite(s): MTM 4000  
Terms Offered: Fall

### **MTM 4300 Manufacturing Innovations (5)**

Contact hours (6 total): 2 lecture, 4 lab  
Interdisciplinary approach to solve real employer-identified problems. Research and analysis methodology. Focus on continued growth of leadership roles, communication techniques, systematic problem-solving skills, and critical thinking. Identify how to remedy training gaps in individuals and teams. Understand complex project timelines and their interdependencies. Organizational planning and decision making. Identify cost savings efficiencies. Strategies to foster innovation. Responsibilities in innovation skill-building/leadership. Use of an integrated teaching model, (I-BEST) with manufacturing and business management faculty.  
Prerequisite(s): PHY 1501  
Pre/Corequisite(s): MTM 4000  
Terms Offered: Spring

### **MTM 4400 Advanced Project Management for Manufacturing Processes (4)**

Contact hours (6 total): 2 lecture, 4 lab  
Analysis of logistics, product relationships, cost factors, inventory management. Examine International Organization for Standardization (ISO). Development of a process improvement plan. Managing budgets and cost factors, leading project teams, resource allocation, delegation of tasks and how they relate to the manufacturing environment. Team development and ways to enhance team performance through planning and executing a project. Evaluation of employees. Applying management theory at all levels. Use of an integrated teaching model, (I-BEST) with manufacturing and business management faculty.  
Prerequisite(s): MTM 4300  
Lab Fee: \$50.00  
Terms Offered: Spring

## **(MUS) MUSIC**

### **MUS 1130 Music Appreciation (3)**

Contact hours (3 total): 3 lecture  
A survey of Western and non Western (secular and sacred) music from approximately 450 AD to the present; a chronological presentation of material supplemented with basic elements of music, listening examples, and live performances.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.  
Terms Offered: Fall, Spring

### **MUS 1161 Applied Voice (1)**

Private voice instruction focusing on the fundamental of voice production, song literature interpretation, and performance skill. Thirty minutes of private instruction per week. May be taken up to 4 terms.  
Prerequisite(s): NextGen Accuplacer reading score of 220 or higher  
Lab Fee: \$100.00  
Terms Offered: Fall, Spring, Summer

### **MUS 1171 Applied Piano (1)**

Individual piano instruction focusing on the fundamentals of piano performance skills. May be taken up to 4 terms.  
Prerequisite(s): NextGen Accuplacer reading score of 220 or higher  
Other Fee: \$100.00  
Terms Offered: Fall, Spring, Summer

## **(NTK) NETWORKING**

### **NTK 1110 PC Hardware Essentials (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Installing, configuring, upgrading, and troubleshooting microcomputer hardware. Desktop, notebook, server systems, and basic networking. First of two-course sequence covering A+ certification objectives. Use of Windows PC required.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Lab Fee: \$75.00  
Terms Offered: Fall, Spring, Summer

### **NTK 1120 PC Operating Systems Essentials (3)**

Contact hours (4 total): 2 lecture, 2 lab

Intensive introduction to multitasking operating systems and network operating systems. Operating system upgrades/configuration, installation procedures, security issues, backup procedures, remote access, command line, and graphical user interfaces. Second of a two-course sequence covering the A+ certification objectives. Use of Windows PC required.

Prerequisite(s): NTK 1110

Lab Fee: \$75.00

Terms Offered: Fall, Spring, Summer

### **NTK 1211 Fundamentals of Networking (3)**

Contact hours (4 total): 2 lecture, 2 lab

Convergence technology terms and concepts. Networking fundamentals, TCP/IP networking basics, and merging of voice, and data traffic. Hands-on experience with convergence equipment and software. Planning, installing, configuring, managing, optimizing, and troubleshooting voice, video, and data infrastructures. Configuring wireless technologies and security. Use of Windows PC required.

Pre/Corequisite(s): NTK 1120

Lab Fee: \$75.00

Terms Offered: Fall, Spring

### **NTK 2105 Cisco Certified Network Associate I (3)**

Contact hours (4 total): 2 lecture, 2 lab

Architectures, models, protocols, and networking elements that connect users, devices, applications, and data through the Internet and across modern computer networks. Includes IP addressing and Ethernet fundamentals. Cisco Certified Network Associate (CCNA) certification objectives. Use of Windows PC required.

Prerequisite(s): NTK 1211

Lab Fee: \$75.00

Terms Offered: Fall

### **NTK 2115 Cisco Certified Network Associate II (3)**

Contact hours (4 total): 2 lecture, 2 lab

Switching technologies and router operations that support small-to-medium business networks. Wireless Local Area Networks (WLAN) and security concepts. Cisco Certified Network Associate (CCNA) certification objectives. Use of Windows PC required.

Prerequisite(s): NTK 2105

Lab Fee: \$75.00

Terms Offered: Fall

### **NTK 2125 Cisco Certified Network Associate III (3)**

Contact hours (4 total): 2 lecture, 2 lab

Enterprise networking, security, and automation. Architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. Includes Wide Area Network (WAN) technologies and Quality of Service (QoS) mechanisms for secure remote access, along with software-defined networking, virtualization, and automation concepts. Cisco Certified Network Associate (CCNA) certification objectives. Use of Windows PC required.

Prerequisite(s): NTK 2115

Lab Fee: \$75.00

### **NTK 2150 Cloud Technologies (3)**

Contact hours (4 total): 2 lecture, 2 lab

Cloud computing basics, cloud architecture, infrastructure security, managing cloud security risk, data security, application and identity management, security operations. Use of Windows PC required.

Prerequisite(s): NTK 1211

Lab Fee: \$75.00

Terms Offered: Spring

### **NTK 2212 Linux Server Administration (3)**

Contact hours (4 total): 2 lecture, 2 lab

Hands-on experience with Linux server operating systems. Planning, installing, configuring, managing, optimizing, and troubleshooting. Use of Windows PC required.

Pre/Corequisite(s): NTK 1120

Lab Fee: \$75.00

Terms Offered: Spring

### **NTK 2220 Microsoft Client Administration (3)**

Contact hours (4 total): 2 lecture, 2 lab

Hands-on experience with the Microsoft Client operating system. Installing, configuring, optimizing, and troubleshooting. Course covers Microsoft certification objectives. Use of Windows PC required.

Pre/Corequisite(s): NTK 1211

Lab Fee: \$75.00

Terms Offered: Fall

### **NTK 2222 Administering Microsoft Server (3)**

Contact hours (4 total): 2 lecture, 2 lab

Hands-on experience with the Microsoft Server operating system. Planning, installing, configuring, managing, optimizing, and troubleshooting. Course covers Microsoft certification objectives. Use of Windows PC required.

Prerequisite(s): NTK 2220

Lab Fee: \$75.00

Terms Offered: Fall

### **NTK 2890 Computer Networking Capstone (3)**

Contact hours (3 total): 3 lecture

Overview of ethics in the information technology field. Assessment of skills and competencies of network administration through project-based activities. Requires an oral and written presentation. Should be taken in final term prior to graduation. Use of Windows PC required.

Pre/Corequisite(s): NTK 2125

Lab Fee: \$75.00

Other Fee: \$35.00

Terms Offered: Spring

## (NUR) NURSING

### **NUR 1121 Fundamentals of Pharmacology & Dosage Calculation (1)**

Contact hours (1 total): 1 lecture

Application of the nursing process in relation to commonly prescribed, over-the-counter, and supplemental drug therapy. Concepts of pharmacology, drug classifications, prototypes of drug groups, mechanisms of action, indications, cautions, contraindications, drug interactions, adverse effects of drugs, and specific nursing considerations required for safe administration. Principles of pharmacodynamics, pharmacokinetics, and pharmacogenomics. Evaluation of pharmacological efficacy, educational needs of the patient in relation to medication regimes, and dosage calculation. 15 theory hours.

Pre/Corequisite(s): MTH 0530 if a grade of C or higher has not been earned in MTH 0500

Corequisite(s): NUR 1130

Terms Offered: Fall, Spring, Summer

### **NUR 1123 Pharmacology III (1)**

Contact hours (1 total): 1 lecture

Continuation of dosage calculation, patient safety, legal and ethical considerations, and appropriate nursing care regarding medication administration. Safe medication administration practices, common side effects, and nursing interventions associated with medications commonly utilized in the care of patients with cardiovascular, neurological, gastrointestinal, immunological, and hematological disorders. Pharmacological decisions via application of pharmacological concepts to care for patients with complex physical and behavioral health care needs. 15 theory hours.

Prerequisite(s): NUR 1122

Terms Offered: Fall, Spring

### **NUR 1130 Basic Nursing Concepts (6.5)**

Contact hours (11.5 total): 4 lecture, 2.5 lab, 5 clinical

Introduces basic nursing concepts, psychomotor skills, assessment techniques, nursing process, and study skills. Applies concepts of ethics and safety in the care of adults undergoing surgery, experiencing problems of mobility, and experiencing endocrine disorders. Incorporates the principles of evidence-based care, advocacy, caring and learning to promote health in adults within the context of environment. 37.5 total semester lab hours; 75 total semester clinical hours. 60 total semester classroom theory hours; 37.5 semester lab hours; 75 total semester clinical hours. 112.5 Combined lab and clinical clock hours. Prerequisite(s): Current Ohio State Tested Nurse Aide (STNA) certification or MST 1181 within 2 years. and FYE 1100

Pre/Corequisite(s): BIO 2121 and NUR 1110

Instructor Permission Required.

Lab Fee: \$473.00

Student Liability Fee: \$20.00

Terms Offered: Fall, Spring, Summer

### **NUR 1132 Adult Nursing I (6.5)**

Contact hours (12.5 total): 3.5 lecture, 2 lab, 7 clinical

Applies principles of ethics, safety, and nursing process in the care of adults with fluid and electrolyte, acid/base balance, respiratory, renal and select endocrine disorders; hypertension; and congestive heart failure. Incorporates the principles of evidence-based care, advocacy, caring, and learning to promote health in adults within the context of environment. 52.5 total semester classroom theory hours; 30 total semester lab hours; 105 total semester clinical hours. 135 combined lab and clinical clock hours.

Prerequisite(s): NUR 1130, ENG 1111, PSY 1111, BIO 2121, and NUR 1110

Pre/Corequisite(s): BIO 2122

Lab Fee: \$265.00

Terms Offered: Fall, Spring

### **NUR 1134 Behavioral Health Nursing (2.5)**

Contact hours (3.5 total): 2 lecture, 1.5 clinical

Introduces concepts of behavioral health and psychosocial assessment across the lifespan in a variety of settings. Applies concepts of ethics and safety in the care of patients experiencing commonly occurring psychiatric, emotional, and developmental disorders, substance abuse, family violence, difficult life transitions, and challenging behaviors. Incorporates the principles of evidence-based care, advocacy, caring, and learning to promote behavioral health within the context of the environment. 30 total semester classroom theory hours; 0 total semester lab hours; 22.5 total semester clinical hours.

Prerequisite(s): ENG 1111, PSY 1111, and BIO 2121

Pre/Corequisite(s): BIO 2122 and NUR 1132, NUR 1135, or NUR 1137

Lab Fee: \$178.00

Terms Offered: Fall, Spring

### **NUR 1135 LPN to RN Transition (3)**

Contact hours (4 total): 2 lecture, 2 lab

Assists in the transition of the LPN to the role of RN. Refines and updates previous learning of basic nursing concepts, psychomotor skills, assessment techniques, and study skills. Applies principles of ethics, safety, and nursing process in the care of adults. Incorporates the principles of evidence-based care, advocacy, caring, and learning to promote and maintain health. Follows the Ohio Nursing Articulation Model. 30 total semester classroom theory hours; 30 total semester lab hours; 0 total semester clinical hours.

Prerequisite(s): BIO 2122, ENG 1111, and FYE 1100

Pre/Corequisite(s): NUR 1136 and NUR 1110

Instructor Permission Required.

Lab Fee: \$370.00

Student Liability Fee: \$20.00

Terms Offered: Fall, Spring, Summer

### **NUR 1136 Adult Nursing for LPNs (2)**

Contact hours (2 total): 2 lecture

Applies principles of ethics, safety, and nursing process in the care of adults with mobility, fluid and electrolyte, acid/base balance, respiratory, endocrine, and renal disorders; hypertension; and congestive heart failure. Incorporates the principles of evidence-based care, advocacy, caring, and learning to promote health in adults within the context of environment. 30 total semester classroom theory hours; 0 total semester lab hours; 0 total semester clinical hours.

Prerequisite(s): BIO 2122 and ENG 1111

Pre/Corequisite(s): NUR 1135

Instructor Permission Required.

Lab Fee: \$265.00

Terms Offered: Fall, Spring, Summer

### **NUR 1137 Paramedic to RN Transition (2.5)**

Contact hours (3.5 total): 2 lecture, 1.5 lab

Assists in the transition of the paramedic to the role of RN. Refines and updates previous learning of assessment techniques, psychomotor skills, and study skills. Introduces basic nursing concepts and nursing process. Applies principles of ethics, safety, and nursing process in the care of adults undergoing surgery, experiencing problems of mobility, and experiencing endocrine disorders. Incorporates the principles of evidence-based care, advocacy, caring, and learning to promote and maintain health. 30 total semester classroom theory hours; 22.5 total semester lab hours; 0 total semester clinical hours.

Prerequisite(s): BIO 2122, PSY 1111, and ENG 1111 and MST 1181 and FYE 1100 (or current STNA certificate or proficiency testing)

Pre/Corequisite(s): NUR 1110

Instructor Permission Required.

Lab Fee: \$377.00

Terms Offered: Fall

### **NUR 1138 Adult Nursing for Paramedics (4.5)**

Contact hours (8.5 total): 2.5 lecture, 6 clinical

Applies principles of ethics, safety, and nursing process in the care of adults with fluid and electrolyte, acid/base balance, respiratory, and renal disorders; hypertension; and congestive heart failure. Incorporates the principles of evidence-based care, advocacy, caring, and learning to promote health in adults within the context of environment. 37.5 total semester classroom theory hours; 0 total semester lab hours; 90 total semester clinical hours.

Prerequisite(s): NUR 1110, NUR 1137, BIO 2122, PSY 1111, and ENG 1111

Instructor Permission Required.

Lab Fee: \$265.00

Student Liability Fee: \$20.00

Terms Offered: Fall

### **NUR 2232 Children-Family Nursing (2.5)**

Contact hours (3.5 total): 2 lecture, 1.5 clinical

Applies principles of ethics, safety, and nursing process in the care of children and families experiencing common childhood and developmental disorders. Incorporates the principles of evidence-based care, advocacy, caring, and learning to promote and maintain health within the context of family. 30 total semester classroom theory hours; 0 total semester lab hours; 22.5 total semester clinical hours.

Prerequisite(s): BIO 2122, PSY 2223, ENG 1112, and NUR 1132 or NUR 1138, or NUR 1135 and NUR 1136, NUR 2236

Pre/Corequisite(s): BIO 1131 and NUR 2239

Lab Fee: \$178.00

Terms Offered: Fall, Spring

### **NUR 2234 Maternal-Newborn Nursing (2.5)**

Contact hours (3.5 total): 2 lecture, 1.5 clinical

Applies principles of ethics, safety, and nursing process in the context of female reproduction and newborn health. Emphasis on physiological changes of pregnancy, prevention of complications, conditions of the high-risk newborn, and common gynecological disorders. Incorporates the principles of evidence-based care, advocacy, caring, and learning using a family-centered approach. 30 total semester classroom theory hours; 0 total semester lab hours; 22.5 total semester clinical hours.

Prerequisite(s): ENG 1112, PSY 2223, BIO 2122, and NUR 1132 or NUR 1138 or NUR 1135 and NUR 1136

Pre/Corequisite(s): BIO 1131

Corequisite(s): NUR 2236

Lab Fee: \$178.00

Terms Offered: Fall, Spring

### **NUR 2236 Adult Nursing II (6.5)**

Contact hours (11.5 total): 4 lecture, 0.5 lab, 7 clinical

Applies the nursing process utilizing evidence-based, patient-centered nursing care of adult patients with cardiovascular, neurological, gastrointestinal, immunological, and hematological disorders.

Demonstrates appropriate nursing judgment skills in the clinical setting, providing safe, quality care. Utilizes technology to communicate and function effectively within the inter-professional team. 60 total semester classroom theory hours; 7.5 semester lab hours; 105 total semester clinical hours. 112.5 combined lab and clinical hours.

Prerequisite(s): BIO 2122, ENG 1112, PSY 2223, and NUR 1132 or NUR 1138 or NUR 1135 and NUR 1136

Pre/Corequisite(s): BIO 1131

Corequisite(s): NUR 2234

Lab Fee: \$286.00

Student Liability Fee: \$20.00

Terms Offered: Fall, Spring

### **NUR 2239 Adult Nursing III (8)**

Contact hours (15 total): 4.5 lecture, 0.5 lab, 10 clinical

Applies the nursing process utilizing evidence-based, patient-centered nursing care of adult patients with complex cardiovascular, respiratory, neurological, multi-system, oncological disorders, and burns. Professional leadership and management utilizing teamwork and collaboration, integrating quality improvement methodologies to improve safety in the delivery of nursing care. Utilizes appropriate nursing judgments in the clinical setting; identifies appropriate care for communities during emergency, disaster, and bio-terrorism events. Emphasis on current National Council Licensure Exam (NCLEX) test plan. 67.5 total semester classroom theory hours; 7.5 total semester lab hours; 150 total semester clinical hours. 157.5 combined lab and clinical clock hours.

Prerequisite(s): NUR 2236, NUR 2234, NUR 1134, and BIO 1131

Pre/Corequisite(s): NUR 2232

Lab Fee: \$548.00

Terms Offered: Fall, Spring

### **NUR 2241 RN Capstone (1)**

Contact hours (1 total): 1 lecture

Refinement of nursing concepts related to complex patient situations, development of test-taking skills, implementation of anxiety control measures for effective test taking during the RN licensure examination.

Integration and exploration of concepts in biological and social sciences. 15 theory hours.

Prerequisite(s): NUR 2236, NUR 2234, and NUR 1123

Corequisite(s): NUR 2239 and NUR 2232

Instructor Permission Required.

Terms Offered: Fall, Spring

### **NUR 3000 Theoretical Foundations of Nursing Practice (3)**

Contact hours (3 total): 3 lecture

Introduction and analysis of nursing theories, conceptual frameworks, and program philosophy.

Prerequisite(s): Admission to the BSN Completion Program

Instructor Permission Required.

Terms Offered: Fall, Spring



### **NUR 3003 Nursing Care of the Gerontological/Post-Acute Patient (4)**

Contact hours (3 total): 3 lecture

Provision of knowledge, skills, and nursing process to care for gerontological/Post-Acute Care patients; issues related to aging. Includes certification as a Post-Acute Care nurse. Prerequisite(s): Admission to the BSN Completion Program

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **NUR 3100 Nursing Leadership (4)**

Contact hours (3 total): 3 lecture

Concepts of nursing leadership and management. Change theories, group dynamics, conflict resolution, and organizational systems. Legal, political, economic, and ethical aspects of nursing.

Prerequisite(s): Admission to the BSN Completion Program

Instructor Permission Required.

Terms Offered: Fall, Spring

### **NUR 3200 Nursing Informatics (3)**

Contact hours (3 total): 3 lecture

Application of information science and technology in patient care. Use of information science to evaluate care, patient outcomes, and care systems to inform quality improvement and financial decision making. Selection of information systems for patient care. Review of ethical, legal, and regulatory issues.

Prerequisite(s): Admission to the BSN Completion Program

Instructor Permission Required.

Terms Offered: Fall, Spring

### **NUR 4000 Community Health Nursing (4)**

Contact hours (3 total): 3 lecture

Application of nursing strategies to promote population-focused health strategies in the community. Evidence-based practice exploring concepts and practices related to community health theory, epidemiology, and assessment. History of community health nursing and the various roles of the nurse in the community setting.

Prerequisite(s): Admission to the BSN Completion Program

Instructor Permission Required.

Terms Offered: Fall, Spring

### **NUR 4001 Nutrition for Nursing (3)**

Contact hours (3 total): 3 lecture

Principles of human nutrition with emphasis on nutrient function, digestion, absorption, metabolism, inter-relationships, and requirements. Influence of socioeconomic, cultural, psychological, and environmental factors on food choices. Nursing process in assessment of diet patterns, nutritional health risks, and nutrient needs throughout the life cycle.

Prerequisite(s): Admission to the BSN Completion Program

Instructor Permission Required.

Terms Offered: Fall, Spring

### **NUR 4002 Interprofessional Practice and Team-Based Care (4)**

Contact hours (3 total): 3 lecture

Interprofessional and interdisciplinary practice and its impact on safety and quality of patient care.

Prerequisite(s): Admission to the BSN Completion Program

Instructor Permission Required.

Terms Offered: Fall, Spring

### **NUR 4102 Nursing Research and Evidence-Based Practice (3)**

Contact hours (3 total): 3 lecture

Examination of research and evidence-based practice (EBP) processes. Evaluation of scientific research. Identification, interpretation, and utilization of research and EBP findings applicable to nursing practice.

Prerequisite(s): Admission to the BSN Completion Program

Instructor Permission Required.

Terms Offered: Fall, Spring

### **NUR 4200 Transcultural Nursing (3)**

Contact hours (3 total): 3 lecture

Concepts of transcultural nursing and their application to nursing care of a diverse group of patients. Health beliefs and practices of several cultural groups and subgroups. Nursing research used to inform the study of transcultural nursing and cultural competence.

Prerequisite(s): Admission to the BSN Program

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **NUR 4201 The Role of the Professional Nurse in Quality and Safety of Care (3)**

Contact hours (3 total): 3 lecture

Role of the registered nurse in relation to quality and safety of care. Quality improvement and safety of care. Examination and evaluation of strategies used to create and sustain safe healthcare delivery systems.

Prerequisite(s): Admission to the BSN Program

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **NUR 4204 BSN Completion Capstone (6)**

Contact hours (4 total): 4 lecture

Synthesis and utilization of knowledge and skills gained while enrolled in the BSN Completion Program. Concepts of nursing informatics, leadership, teaching and learning principles, communication, nursing research, evidence-based practice, critical thinking, and health promotion.

Prerequisite(s): Admission to the BSN Program

Instructor Permission Required.

## **(NWM) NEW MEDIA**

### **NWM 1000 Introduction to New Media (2)**

Contact hours (3 total): 1 lecture, 2 lab

Introduction to technology, theory, practice, and basic principles of new media. Portfolio development.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$75.00

Terms Offered: Fall

### **NWM 1005 Digital Aesthetics and User Experience (3)**

Contact hours (4 total): 2 lecture, 2 lab

Aesthetic online design and layout including design elements and principles, color theory, and typography.

User experience design and usability testing.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$55.00

Terms Offered: Spring

### **NWM 1010 Social Media and Digital Interactivity (3)**

Contact hours (4 total): 2 lecture, 2 lab

Social media vocabulary. Social media as a marketing and promotional tool. Online tools that encourage interactivity. "Viral" phenomenon and online advertising.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$55.00

Terms Offered: Spring



### **NWM 1020 Adobe for Web Professionals (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Use Adobe products to enhance web designs and online media. Create eBook. Software: Adobe Illustrator, Adobe Photoshop, and Adobe InDesign.  
Prerequisite(s): GPH 1001 (or instructor permission)  
Lab Fee: \$60.00  
Terms Offered: Spring

### **NWM 1610 Web Design (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Web design and publishing, introduction to responsive design, and use content management system.  
Prerequisite(s): ITS 1500  
Lab Fee: \$60.00  
Terms Offered: Spring

### **NWM 2000 Digital Multimedia I (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Digital video and audio. Post and share projects online.  
Prerequisite(s): NWM 1000 and GPH 1001 (or instructor permission)  
Lab Fee: \$175.00  
Terms Offered: Fall

### **NWM 2010 Digital Multimedia II (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Motion graphics for video and 2D digital animation. Interactive animation.  
Prerequisite(s): NWM 2000 with a grade of C or higher or Instructor Permission  
Lab Fee: \$140.00  
Terms Offered: Spring

### **NWM 2100 Web Programming, Scripting, and Database (3)**

Contact hours (4 total): 2 lecture, 2 lab  
PHP scripting language and MySQL, open source database. Ruby on Rails for web programming. Dynamic web pages and interactive elements.  
Prerequisite(s): CSD 1510 and NWM 1600  
Lab Fee: \$60.00  
Terms Offered: Fall

### **NWM 2200 New Media Internship (2)**

Contact hours (1 total): 1 lecture  
New media solutions for local companies or community organizations.  
Prerequisite(s): NWM 1010, NWM 2000, and ITS 2310  
Lab Fee: \$30.00  
Terms Offered: Spring

### **NWM 2210 New Media Capstone (3)**

Contact hours (4 total): 2 lecture, 2 lab  
New media solutions for local companies or community organizations. Portfolio evaluation and preparation.  
Prerequisite(s): NWM 1010 with a grade of C or higher and NWM 1610 with a grade of C or higher and NWM 2000 with a grade of C or better  
Lab Fee: \$175.00  
Terms Offered: Spring

### **NWM 2400 Advanced Web Design (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Open source content management systems, websites with advanced functionality, including e-commerce, search engine optimization (SEO) and prototyping.  
Prerequisite(s): NWM 1005 with a grade of C or higher and NWM 1610 with a grade of C or higher  
Lab Fee: \$60.00  
Terms Offered: Fall

## **(OAD) OFFICE ADMINISTRATION**

### **OAD 1101 Document Production I (3)**

Contact hours (5 total): 1 lecture, 4 lab  
Production of common business correspondence, simple reports, and basic tables, using Microsoft Word 2016 software; emphasis on accuracy. Minimum typing speed of 35 gwpm required.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall, Spring

### **OAD 1102 Document Production II (3)**

Contact hours (5 total): 1 lecture, 4 lab  
Production of complex business correspondence, reports and tables, using Microsoft Word 2016 software. Introduction to desktop publishing; emphasis on speed and accuracy. Minimum typing speed of 40 words per minute expected.  
Prerequisite(s): OAD 1101 with a grade of C or higher  
Terms Offered: Fall, Spring

### **OAD 1105 Business English (4)**

Contact hours (4 total): 4 lecture  
Parts of speech; sentence elements, varieties, patterns, types, and faults; nouns; possessive nouns; personal pronouns; pronouns and antecedents; verb kinds, voices, and moods; verb tenses and parts; subject-verb agreement; adjective and adverb modifiers; prepositions; conjunctions; commas; semicolons and colons; capitalization; number style; and proofreading.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall, Spring, Summer

### **OAD 1205 Office Procedures (3)**

Contact hours (3 total): 3 lecture  
Basic office administrative skills and concepts, including the work environment; ethics; stress, anger, and time management; workplace technologies; information processing; telecommunications; written communication; presentations; the workplace team; customer service; workplace mail and copiers; travel arrangements; meetings and conferences; and leadership. Also included is a comprehensive overview of records management procedures including alphabetic indexing rules, electronic file management, alphabetic records management, equipment, and procedures, and storing, retrieving, and transferring records.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall

### **OAD 2205 Electronic Health Records (3)**

Contact hours (5 total): 1 lecture, 4 lab  
Development of techniques for acquiring advanced skills in the use of medical office management software. Encompasses the entire reimbursement process and applies it to practice-management software starting with appointment scheduling and moving through patient registration, procedure posting, medical billing with paper claims and electronically, payment posting, secondary insurance billing, patient billing, patient collections, and insurance tracking and follow-up.  
Pre/Corequisite(s): MST 1105  
Terms Offered: Fall, Spring

### **OAD 2301 CPT/ICD-10-PCS Coding (3)**

Contact hours (3 total): 3 lecture

Introduction to CPT codes for insurance billing and reimbursement. Use of coding manuals plus the most recent coding classifications and guidelines. Coding steps explained. Procedural classification system. This course is offered in a hybrid format that is required to meet every week.

Pre/Corequisite(s): BIO 1105 and MST 1105

Terms Offered: Fall, Spring

### **OAD 2302 ICD-10-CM Coding (3)**

Contact hours (3 total): 3 lecture

Introduction to ICD-10-CM codes for insurance billing and reimbursement. Coding manuals, recent code updates and guidelines. Coding steps. Diagnostic classification system. This course is offered in a hybrid format that is required to meet every week.

Pre/Corequisite(s): BIO 1105 and MST 1105

Terms Offered: Fall, Spring

### **OAD 2312 Advanced Medical Coding (3)**

Contact hours (3 total): 3 lecture

Coding experience using ICD-10-CM, CPT/ICD-10-PCS and HCPCS numeric representation. Specialized areas of coding. Certification related to specialty areas. Policies, forms, technology, and processes associated with medical billing protocol. Medicare information. Reimbursement. This course is offered in a hybrid format that is required to meet for the first two weeks and then every other week thereafter.

Prerequisite(s): OAD 2301 and OAD 2302

Terms Offered: Fall, Spring

### **OAD 2320 Medical Office Certification Review (1)**

Contact hours (1 total): 1 lecture

Review of electronic health records, medical ethics, and medical coding requirements for credentialing exam. Emphasis on Certified Coding Associate (CCA) and Certified Electronic Health Records Specialist (CEHRS). Certification exams administered within course. This course is offered in a hybrid format that is required to meet every other week.

Prerequisite(s): OAD 2301 and OAD 2302

Pre/Corequisite(s): MST 1140

Certification Fee: \$299.00

Terms Offered: Fall, Spring

### **OAD 2703 Co-op Education/Internship (3)**

Contact hours (1.5 total): 1.5 lecture

Relating academic studies to the workplace through a supervised work placement that provides hands-on experience in a professional office or medical office. Applying principles and theories learned in the classroom, establishing learning outcomes, and preparing related reports. Attending weekly seminars that allow opportunity for discussion of work-related experiences and relevant topics. Workplace learning equal to fifteen (15) hours per week for a fifteen (15) week term as well as a minimum of 225 documented hours.

Prerequisite(s): EBE 1000 and co-op placement; Instructor permission required

Instructor Permission Required.

Terms Offered: Spring

## **(PDR) PROFESSIONAL DIGITAL REPORTER**

### **PDR 1501 Digital Reporting Concepts (2)**

Contact hours (3 total): 1 lecture, 2 lab

Principles and ethics using hardware and software recording options in digital reporting; proficiency in system components, setup, and functionality; annotation file creation and usage; file naming conventions; upload/download files to directories, cloud-based sites, and external storage devices; test audio for various professional venues; troubleshoot software, hardware, and peripherals; speaker designations and parenthetical creation/usage; search and audio playback; examination of verbatim transcripts; secure digital file transmission; archival/disposal process of audio and transcript files.

Lab Fee: \$100.00

Terms Offered: Fall, Spring

## **(PED) PHYSICAL EDUCATION**

### **PED 1001 Beginning Pilates Mat Science (1)**

Contact hours (2 total): 2 lab

Proper breathing. Principles of mat science. Components of fitness. Pilates equipment.

Terms Offered: Fall, Spring

### **PED 1002 Step Aerobics (1)**

Contact hours (2 total): 2 lab

Warm-up exercises, strength and flexibility exercises, and cool down exercises. Knowledge of safe fitness techniques and benefits.

Terms Offered: Fall, Spring

### **PED 1003 Beginning Weight Training (1)**

Contact hours (2 total): 2 lab

Correct weight training procedures, proper handling of equipment, training principles, composition of an individual total workout program, and dietary effects.

Terms Offered: Fall, Spring

### **PED 1004 Intermediate Weight Training (1)**

Contact hours (2 total): 2 lab

Intermediate level of free weight training. Setting up a personal program. Safety and nutrition information.

Terms Offered: Fall, Spring

### **PED 1005 Beginning Tennis (1)**

Contact hours (2 total): 2 lab

Forehand drive, backhand drive, volleying, serving, and footwork. History, rules, terms, scoring, simple strategies, and the etiquette of tennis.

Terms Offered: Fall, Spring, Summer

### **PED 1006 General Physical Conditioning (1)**

Contact hours (2 total): 2 lab

Principles and benefits of physical conditioning, warm-up/stretching exercises, aerobic and strength exercises (walking, jogging, rope skipping, stationary biking, weight training), flexibility exercises, and cool down exercises.

Terms Offered: Fall, Spring

### **PED 1007 Yoga for Beginners (1)**

Contact hours (2 total): 2 lab

Reducing stress through focused breathing and relaxation exercises using meditation techniques.

Terms Offered: Fall, Spring

### **PED 1008 Beginning Basketball (1)**

Contact hours (2 total): 2 lab

Shooting, passing, dribbling, and defense along with game play. Includes equipment, rules, terms scoring, and etiquette of basketball.

Terms Offered: Fall, Spring

### **PED 1009 Intermediate Basketball (1)**

Contact hours (2 total): 2 lab

Intermediate phase of shooting, passing, dribbling, and defense along with game play. Includes equipment, rules, terms, scoring, and etiquette of basketball.

Terms Offered: Fall, Spring

### **PED 1010 Beginning Golf (1)**

Contact hours (2 total): 2 lab

Driving, putting, chipping, and pitching along with fair play. Also includes the history, equipment, rules, terms, scoring, and etiquette of golf.

Prerequisite(s): none

Lab Fee: \$20.00

Terms Offered: Fall, Spring

### **PED 1011 Pilates II Mat Stability Ball (1)**

Contact hours (2 total): 2 lab

Advanced study of breathing techniques, progressive mat science, detailed practice in core stability, Pilates equipment.

Terms Offered: Spring

### **PED 1012 Continuing Yoga (1)**

Contact hours (2 total): 2 lab

Using yoga and meditation techniques to reduce stress.

Terms Offered: Fall, Spring

### **PED 1013 Karate Self Defense for Beginners (1)**

Contact hours (2 total): 2 lab

Punching and kicking drills, takedown, self-discipline, and control of hostile situations. History, philosophy, and discipline used in Kenpo and Aikijitsu. Belt rank in karate optional at additional cost.

Terms Offered: Fall

### **PED 1014 Intermediate Karate Self Defense (1)**

Contact hours (2 total): 2 lab

Intermediate level kicks, hand techniques, hand trapping, and escapes. Belt rank in karate optional at additional cost.

Prerequisite(s): PED 1013 (or equivalent experience as determined by instructor)

Instructor Permission Required.

Terms Offered: Fall, Spring

## **(PHL) PHILOSOPHY**

### **PHL 2000 Critical Thinking (3)**

Contact hours (3 total): 3 lecture

Introduction to basic reasoning skills: distinguish knowledge from belief and truth; evaluate relevant information; identify assumptions; detect biased and fallacious reasoning; identify, analyze, and evaluate basic inductive and deductive arguments.

Pre/Corequisite(s): ENG 1111

Terms Offered: Fall

### **PHL 2100 Ethics (3)**

Contact hours (3 total): 3 lecture

Philosophical analysis and critique of predominant ethical perspectives from Western philosophy and religion with application to contemporary moral problems such as abortion, drug use, the death penalty, racism, war, terrorism, global poverty, justice, gender, feminism, free speech, animal rights, and environmental ethics.

Pre/Corequisite(s): ENG 1111

Global Awareness.

Terms Offered: Fall, Spring, Summer

### **PHL 2300 Medical Ethics (3)**

Contact hours (3 total): 3 lecture

Application of philosophical analysis and ethical theories to the moral problems arising from modern medical care such as abortion, patients' rights, euthanasia, surrogacy and in vitro fertilization, experimentation with human subjects, the ethics of cloning, and a right to health care. Examination of how moral values affect, and are affected by, medical and biological knowledge and practice.

Pre/Corequisite(s): ENG 1111

Global Awareness.

Terms Offered: Spring

### **PHL 2400 Philosophy of World Religions (3)**

Contact hours (3 total): 3 lecture

Philosophical analysis of the basic salvational beliefs and practices of Judaism, Christianity, Islam, Hinduism, and Buddhism, including: absolutist vs. enculturated conceptual interpretations of ultimate sacred reality; the impact of current scientific theories on arguments for the existence of God and scriptural interpretation; psychological and sociological interpretations of religion; religious vs. scientific explanations of the self, mystical visions, and near-death experiences; and scientific vs. religious arguments on the possibility of resurrection and reincarnation.

Pre/Corequisite(s): ENG 1111

Global Awareness.

Terms Offered: Fall, Spring, Summer

## **(PHY) PHYSICS**

### **PHY 1100 Fundamentals of Physics (4)**

Contact hours (5 total): 3 lecture, 2 lab

Concepts and applications of physics for non-science majors to include: one and two dimensional motion, forces, work and conservation of energy, properties of matter, heat and thermodynamics, waves and sound, electricity, electromagnetism (EM) and EM waves, optics, modern physics. Collection, analysis, and reporting of data, problem-solving concepts, and methods of physics.

Prerequisite(s): MTH 0750, MTH 1115, MTH 1070, or STT 2640 with a grade of C or higher

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$48.00

Terms Offered: Fall, Spring

### **PHY 1501 General Physics I with Algebra (5)**

Contact hours (6 total): 4 lecture, 2 lab

College algebra based physics to include: kinematics in one and two dimensions; vector arithmetic; force and Newton's Laws of Motion and Gravitation; work, energy, and conservation of energy; linear momentum and collisions; rotational kinematics and dynamics, including angular momentum and rotational energy; simple harmonic motion; waves and sound; fluids and elasticity; heat and thermodynamics; kinetic theory of gases; collection, analysis and reporting of data; problem-solving using college algebra concepts and methods.

Prerequisite(s): MTH 1280

Lab Fee: \$55.00

Terms Offered: Fall

### **PHY 1502 General Physics II with Algebra (5)**

Contact hours (6 total): 4 lecture, 2 lab

College algebra based physics to include: electricity, magnetism, electromagnetism, geometric, and wave optics; relativity, quantum physics, atomic physics, nuclear physics, collection, analysis, and reporting of data; problem-solving using algebra concepts and methods.

Prerequisite(s): PHY 1501

Lab Fee: \$65.00

Terms Offered: Spring

### **PHY 2501 College Physics I with Calculus (5)**

Contact hours (6 total): 4 lecture, 2 lab

Kinematics in one and two dimensions; vectors and simple vector analysis; force and Newton's Laws of Motion and Gravitation; work, energy, and conservation of energy; impulse and linear momentum, including elastic and inelastic collisions; rotational kinematics and dynamics, including angular momentum and rotational energy; simple harmonic motion and damped-driven oscillations; waves and sound; fluids and elasticity; heat and thermodynamics; kinetic theory of gases; collection, analysis, and reporting of data; problem-solving using calculus concepts and methods.

Prerequisite(s): PHY 1100

Pre/Corequisite(s): MTH 2200

Lab Fee: \$55.00

Terms Offered: Fall

### **PHY 2502 College Physics II with Calculus (5)**

Contact hours (6 total): 4 lecture, 2 lab

Calculus-based physics to include: electricity; magnetism; electromagnetism; geometric and wave optics; relativity; quantum physics; atomic physics; nuclear physics; collection, analysis, and reporting of data; problem-solving using calculus concepts and methods.

Prerequisite(s): PHY 2501

Lab Fee: \$65.00

Terms Offered: Spring

## **(PLS) POLITICAL SCIENCE**

### **PLS 1100 Introduction to American Politics (3)**

Contact hours (3 total): 3 lecture

Historical foundations of US government; theoretical underpinnings of important government documents; political behavior, voting behavior, and the campaign process. Policymaking process and the role of interest groups and the media. The history and role of political parties in the US. Three branches of United States government and how they function. Formal rules and procedures in American government.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Terms Offered: Fall, Spring, Summer

### **PLS 1300 Introduction to Comparative Politics (3)**

Contact hours (3 total): 3 lecture

Comparative method as it applies to government authority structures, parliamentary, and presidential democratic systems; authoritarian, totalitarian, hybrid, and democratic regimes; patterns of economic and political development; linkages between economic and political development; comparison of political institutions; political ideologies including liberalism, communism, socialism, anarchism, conservatism, and islamism; civil society and social capital; democratization and regime change.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Global Awareness.

Terms Offered: Fall, Spring, Summer

### **PLS 2300 Introduction to International Relations (3)**

Contact hours (3 total): 3 lecture

Evolution of world system, state and nonstate actors, intergovernmental organizations, nation-states, multinational corporations, conflict and cooperation between actors, democratic peace theory, liberalism, realism, constructivism, Marxism, feminism, international events and daily life, links between domestic and international politics, foreign policymaking process, historical world events and contemporary world events, and international political economy.

Pre/Corequisite(s): ENG 1111

Global Awareness.

Terms Offered: Fall, Spring

### **PLS 2400 State and Local Politics (3)**

Contact hours (3 total): 3 lecture

Overview of state and local governments in the United States Constitutional structure. The role of the states in American federalism. Comparison of political structures across states and localities, including executive, legislative, and judicial institutions. Comparison of electoral systems across states and localities. Overview of policy issues across the states, including fiscal and budgetary policy. Overview of Ohio politics, including Ohio political history, political institutions, and current policy challenges.

Pre/Corequisite(s): ENG 1111

Terms Offered: Fall

## **(PSY) PSYCHOLOGY**

### **PSY 1111 Introduction to Psychology (3)**

Contact hours (3 total): 3 lecture

Introduction to fundamental principles and practices of psychology, including history, methods, biology of behavior, consciousness, perception, learning, thinking, intelligence, language, memory, social and organizational behavior, development, personality, psychopathology, and treatment.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Global Awareness.

Terms Offered: Fall, Spring, Summer



### **PSY 2218 Introduction to Educational Psychology (3)**

Contact hours (3 total): 3 lecture

Major theories of learning, development, and motivation in an educational setting. Exploration of the similarities and differences in student learning, types of instructional strategies, factors that affect student's learning and development. Principles of assessment strategies, including design, implementation, and evaluation. Prerequisite(s): EDU 1110 or PSY 1111, and ENG 1111 Global Awareness.

Terms Offered: Fall, Spring

### **PSY 2223 Lifespan Human Growth and Development (3)**

Contact hours (3 total): 3 lecture

Study of the biological, cognitive, cultural, environmental, and psychosocial development of human beings and the issues surrounding these developments from conception to death. Analysis of theories, myths and misconceptions, and methodological approaches of human development are explored. Applications of developmental psychology principles to daily life throughout the lifespan.

Prerequisite(s): ENG 1111 and PSY 1111

Pre/Corequisite(s): none

Global Awareness.

Terms Offered: Fall, Spring, Summer

### **PSY 2230 Abnormal Psychology (3)**

Contact hours (3 total): 3 lecture

Clinical picture and assessment of suicide, major psychological disorders: anxiety, stress, dissociative, somatoform, mood, eating, substance, sexual, schizophrenia, personality, childhood, and aging disorders. Diagnosis, etiology, prognosis, and treatment of psychological disorders. Evaluate research, historical and cultural viewpoints, current theoretical views of psychological disorders.

Prerequisite(s): ENG 1111 and PSY 1111

Pre/Corequisite(s): ENG 1112

Global Awareness.

Terms Offered: Fall, Spring, Summer

### **PSY 2240 Psychology of Personality (3)**

Contact hours (3 total): 3 lecture

Exploration of perspectives in personality psychology. Evaluation of personality theories, research methods, assessment, and applications.

Prerequisite(s): ENG 1111 and PSY 1111

Global Awareness.

Terms Offered: Fall, Spring

### **PSY 2250 Introduction to Social Psychology (3)**

Contact hours (3 total): 3 lecture

Explores perspectives in social psychology including social cognition, perception, attitude, conformity, interpersonal relations, groups, and social influences through theory and research. Examines how individuals affect and are affected by others.

Prerequisite(s): PSY 1111 and ENG 1111

Global Awareness.

Terms Offered: Fall, Spring

## **(PTA) PHYSICAL THERAPIST ASSISTANT**

### **PTA 1112 PTA Survey (1)**

Contact hours (1 total): 1 lecture

History of physical therapy. History and role of professional organizations, legal and ethical accountability, and healthcare delivery systems. Introduction to the role and scope of work for the physical therapist assistant. Introduction to interpersonal communication, cultural diversity, disability awareness, and professional behavior. Note: The online sections require that the final exam be taken onsite during approved proctoring sessions.

Pre/Corequisite(s): ENG 1111

Terms Offered: Fall, Spring

### **PTA 1122 PTA Procedures I (3)**

Contact hours (5.67 total): 1.67 lecture, 4 lab

Introduction and practice of basic therapeutic procedures: body mechanics, vital signs, infection control, goniometry for all appropriate joints, manual muscle testing for all appropriate muscles / muscle groups; verbal and written communication; clinical documentation; professional behavior; introduction to therapeutic exercise, laboratory practice. The classroom component is online.

Pre/Corequisite(s): ENG 1111, BIO 1119, BIO 2121, MST 1105, and PTA 1112

Instructor Permission Required.

Lab Fee: \$95.00

Terms Offered: Fall

### **PTA 1148 PTA Procedures II (5)**

Contact hours (9 total): 3 lecture, 6 lab

Pathology, data collection, and physical therapy interventions for cardiovascular, lymphatic, immune, endocrine/metabolic, integumentary, gastrointestinal, genitourinary, respiratory disorders, and amputations. Positioning, wheelchair mobility, bed mobility, transfers, gait training, aerobic conditioning, breathing techniques, hydrotherapy, orthotics, and prosthetics. Professional behavioral development. Laboratory practice. Classroom component online.

Prerequisite(s): BIO 2121, MST 1105, BIO 1119, PTA 1112, and PTA 1122

Pre/Corequisite(s): BIO 2122 and PTA 1162

Lab Fee: \$115.00

Terms Offered: Spring

### **PTA 1162 PTA Rehabilitation I (5)**

Contact hours (9 total): 3 lecture, 6 lab

Pathology, data collection, and physical therapy (PT) intervention for orthopedic conditions and musculoskeletal disorders. Positioning, bed mobility, transfers, gait training application to course related diagnoses, tissue healing and repair, pain theories, special orthopedic tests, aquatics, massage, joint mobilization, and detailed study of therapeutic exercise and exercise design. Professional behavioral development. Laboratory practice. Classroom component online.

Prerequisite(s): BIO 2121, MST 1105, BIO 1119, PTA 1112, and PTA 1122

Pre/Corequisite(s): BIO 2122

Lab Fee: \$90.00

Terms Offered: Spring



### **PTA 2231 PTA Directed Practice I (2)**

One week intensive lab prep followed by four weeks provision of physical therapy services in a clinical setting; application of knowledge and role of the physical therapist assistant, performance of skills, and professional behavior at an emerging level. Supervised by clinical and academic faculty. Twenty-four hours lab week one; forty hours directed practice each week during weeks two through five. Prerequisite(s): PTA 1148 and PTA 1162  
Corequisite(s): PTA 2243 and PTA 2291  
Student Liability Fee: \$20.00  
Terms Offered: Summer

### **PTA 2232 PTA Directed Practice II (3)**

One week intensive lab prep followed by five weeks provision of physical therapy services in a clinical setting; application of knowledge and role of the physical therapist assistant, performance of skills, and professional behavior at a competent level. Supervised by clinical and academic faculty. Twenty-four hours lab week one; forty hours directed practice during weeks two through six. Prerequisite(s): PTA 2231 or PTA 2281 and PTA 2291, PTA 2262, and PTA 2270  
Corequisite(s): PTA 2292  
Student Liability Fee: \$20.00  
Terms Offered: Spring

### **PTA 2233 PTA Directed Practice III (3)**

One week intensive lab prep followed by seven weeks provision of physical therapy services in a clinical setting; application of knowledge and role of the physical therapist assistant, performance of skills, and professional behavior at a proficient level. Supervised by clinical and academic faculty. Twenty-four hours lab week one; forty hours directed practice each week during weeks two through eight. Prerequisite(s): PTA 2232, PTA 2275, and PTA 2292  
Corequisite(s): PTA 2293  
Student Liability Fee: \$20.00  
Terms Offered: Spring

### **PTA 2243 PTA Procedures III (4)**

Contact hours (6 total): 3 lecture, 3 lab  
Physical agents including superficial thermal, electrical stimulation, phonophoresis, iontophoresis, traction, infrared, and ultraviolet. Theories of pain. Professional behavioral development. Laboratory practice. Classroom component online. Prerequisite(s): PTA 1148, PTA 1162, and BIO 2122  
Corequisite(s): none  
Lab Fee: \$95.00  
Terms Offered: Summer

### **PTA 2262 PTA Rehabilitation II (5)**

Contact hours (9 total): 3 lecture, 6 lab  
Pathology, data collection, and PT interventions for adult neurological impairments and pediatrics. Normal motor development and motor control. Application of positioning, bed mobility, transfers, gait training, and therapeutic exercise to course-related diagnoses. Adaptive seating, environmental assessment, and professional behavior development. Laboratory practice. Classroom component is online. Prerequisite(s): PTA 2243, PTA 2231, and PTA 2291  
Corequisite(s): PTA 2270  
Lab Fee: \$150.00  
Terms Offered: Fall

### **PTA 2270 PTA Trends and Issues (1)**

Contact hours (1 total): 1 lecture  
Current trends in practice. Healthcare financing. Interpersonal communications. Contracts. Supervisory/management skills. Ethical issues. Professional behavioral development. The classroom component is online. Prerequisite(s): PTA 2243, PTA 2231, and PTA 2291  
Corequisite(s): PTA 2262  
Terms Offered: Fall

### **PTA 2275 PTA Special Topics (1)**

Contact hours (1 total): 1 lecture  
Special topics related to the field of physical therapy including women's health, health promotion, mental health, emergency medicine, occupational work hardening, and common diagnostic procedures. Offered in an 4-week session. The classroom component is online. Onsite requirement for guest speakers. Prerequisite(s): PTA 2231 or PTA 2281 and PTA 2270, PTA 2291, and PTA 2262  
Terms Offered: Spring

### **PTA 2291 PTA Seminar I (1)**

Contact hours (1 total): 1 lecture  
Companion course to PTA 2231. Clinical situations and problem solving; focus on self-evaluation; understanding the work setting and client, coworker behaviors as related to Directed Practice I. Ethical issues. Offered in a 4-week session. The classroom component is online. Prerequisite(s): PTA 1148 and PTA 1162  
Pre/Corequisite(s): none  
Corequisite(s): PTA 2231 and PTA 2243  
Terms Offered: Summer

### **PTA 2292 PTA Seminar II (1)**

Contact hours (1 total): 1 lecture  
Companion course to PTA 2232. Discussion of clinical situations and problem solving; focus on self-evaluation; understanding the work setting and client, coworker behaviors as related to Directed Practice II. Ethical issues and selected course-related topics as determined by the instructor. Resume development. Offered in a 4-week session. The classroom component is online. Prerequisite(s): PTA 2231 and PTA 2270, PTA 2291, and PTA 2262  
Corequisite(s): PTA 2232  
Other Fee: \$40.00  
Terms Offered: Spring

### **PTA 2293 PTA Seminar III (1)**

Contact hours (1 total): 1 lecture  
Companion course to PTA 2233. Discussion of clinical situations and problem solving; understanding the work setting, and client/coworker behaviors related to Directed Practice III. Ethical issues and selected course-related topics as determined by the instructor. Present a second-year Capstone Project. Job search and interview prep. Offered in an 8-week session. Prerequisite(s): PTA 2270 and PTA 2262  
Pre/Corequisite(s): PTA 2232 and PTA 2292  
Corequisite(s): PTA 2233  
Lab Fee: \$40.00  
Terms Offered: Spring

## **(RES) REAL ESTATE**

### **RES 1100 Real Estate Principles (3)**

Contact hours (3 total): 3 lecture

Ohio Division of Real Estate & Professional Licensing principles and practices. Introduction to the market of real property, contractual/property rights, investment, and ownership. Guidelines and operations for the real estate professional. Meets state requirements for licensing. Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall, Spring, Summer

### **RES 1200 Real Estate Law (3)**

Contact hours (3 total): 3 lecture

Real estate transactions and development from the perspective of legal professionals. Contracts, agency, civil rights, deeds, mortgages, and listing/purchasing agreements. Meets state requirements for licensing. Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall, Spring, Summer

### **RES 1300 Real Estate Appraisal (2)**

Contact hours (2 total): 2 lecture

Real estate appraisal techniques including market comparison, cost, and income. Principles, process, and factors that influence the value of real estate. Single-family residential property, with some aspects of commercial income producing properties. Meets state requirements for licensing. Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall, Spring, Summer

### **RES 1400 Real Estate Finance (2)**

Contact hours (2 total): 2 lecture

Real estate finance in both primary and secondary markets. Financing instruments and techniques. Mortgage payment patterns, economic characteristics, standards, and financing of single and income-producing properties. Meets state requirements for licensing. Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Terms Offered: Fall, Spring, Summer

## **(RST) REGIONAL STUDIES**

### **RST 2700 Regional Studies: Africa (3)**

Contact hours (3 total): 3 lecture

The history of Africa from prehistoric times to the present. Focus on the social economic, political, religious, and cultural development from the ice age to the ancient, medieval, and to the present world. Prerequisite(s): ENG 1111  
Global Awareness.  
Terms Offered: Fall, Spring, Summer

## **(SOC) SOCIOLOGY**

### **SOC 1110 Introduction to Sociology (3)**

Contact hours (3 total): 3 lecture

Analysis of social theory, methodology, and principles to provide a framework to study culture, socialization, stratification, and deviance. Comparative analysis of sociologically relevant diverse worldviews: examining political, spiritual, and social systems and economic and cultural traditions. Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Global Awareness.  
Terms Offered: Fall, Spring, Summer

### **SOC 2230 Social Problems (3)**

Contact hours (3 total): 3 lecture

Builds on a general understanding of contemporary causes, treatment, and prevention of social problems within the United States. Advance understanding of social problems, and proposed solutions through the lens of three sociological theories and methodologies. Analyzing proposed solutions to social problems from culturally diverse perspectives.

Pre/Corequisite(s): SOC 1110 and ENG 1111

Global Awareness.

Terms Offered: Fall, Spring, Summer

### **SOC 2240 Racial and Cultural Minorities (3)**

Contact hours (3 total): 3 lecture

Sociological exploration of American racial and ethnic groups. Emphasis placed on the social construction of race and ethnicity, patterns of intergroup contact. Historical comparative analysis of selected groups with emphasis on economic, political and structural inequalities.

Pre/Corequisite(s): ENG 1111 and SOC 1110

Global Awareness.

Terms Offered: Fall, Spring, Summer

### **SOC 2250 Sociology of Poverty: Feminization of Poverty (3)**

Contact hours (3 total): 3 lecture

Historical trends of poverty, stratification of social class, homelessness, families in poverty, feminization of poverty, and racialization of poverty. Consider proposed poverty reducing strategies.

Pre/Corequisite(s): SOC 1110 and ENG 1111

Terms Offered: Fall, Spring, Summer

### **SOC 2270 Marriage and Family (3)**

Contact hours (3 total): 3 lecture

Sociological examination of theoretical perspectives related to the institutions of marriage and family. Topics covered include: historical context of family, role of marriage and family in society, socialization, parenting, impact of family on the individual, family issues, family throughout the life course. Variations of global family types and lifestyles among diverse groups examined. Pre/Corequisite(s): ENG 1111 and SOC 1110  
Global Awareness.

Terms Offered: Fall, Spring, Summer

## **(SPN) SPANISH**

### **SPN 1100 Survival Spanish (3)**

Contact hours (3 total): 3 lecture

Basic pronunciation, phrases, and greetings in Spanish for travel or work. Tools for understanding and forming sentences in Spanish. May not be taken for credit toward graduation if successfully completed SPN 1111, 1112, 2111, 2112 or above at Clark State or any other accredited institution. True beginners' level. Will not meet language requirement for transfer at four-year institutions. Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Global Awareness.

Terms Offered: Fall, Spring

**SPN 1111 Beginning Spanish, Course I (3)**

Contact hours (3 total): 3 lecture

Integration of interpersonal, interpretive, and presentational modes of communication. Practice real-world communicative tasks in culturally appropriate ways. Identify products, practices, and perspectives of the target culture(s). Use grammar, vocabulary, and structures to meet functional performance goals to build a foundation for continued language learning. Perform in the Novice range on the American Council of Teachers of Foreign Languages (ACTFL) Performance Scale. [Note: Learning a foreign language requires active interaction, including listening, reading, speaking, and writing in the language. For online synchronous sections, camera and microphone must be turned on during class for effective interaction and conversation including non-verbal cues.] Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.

Terms Offered: Fall

**SPN 1112 Beginning Spanish, Course II (3)**

Contact hours (3 total): 3 lecture

Integration of interpersonal, interpretive, and presentational modes of communication. Practice real-world communicative tasks in culturally appropriate ways. Identify products, practices, and perspectives of the target culture(s). Use grammar, vocabulary, and structures to meet functional performance goals to build a foundation for continued language learning. Perform better and stronger in the Novice range on the American Council of Teachers of Foreign Languages (ACTFL) Performance Scale. Some abilities developing in Intermediate range. [Note: Learning a foreign language requires active interaction, including listening, reading, speaking, and writing in the language. For online synchronous sections, camera and microphone must be turned on during class for effective interaction and conversation including non-verbal cues.]

Prerequisite(s): SPN 1111 with a grade of C or higher, or demonstrated proficiency in indicated area of study Global Awareness.

Terms Offered: Spring

**SPN 2111 Intermediate Spanish, Course I (3)**

Contact hours (3 total): 3 lecture

Integration of learning outcomes across interpersonal, interpretive, and presentational modes of communication. Accomplish real-world communicative tasks in culturally appropriate ways and gain familiarity with products, practices, and perspectives of the target culture(s). Use grammar, vocabulary, and structures for meeting functional performance goals at this level and to build a foundation for continued language learning. Consistently perform in the Novice range. More abilities emerge and develop in the Intermediate range.

Prerequisite(s): SPN 1112 with a grade of C or higher, or demonstrated proficiency in indicated area of study Global Awareness.

Terms Offered: Fall

**SPN 2112 Intermediate Spanish, Course II (3)**

Contact hours (3 total): 3 lecture

Integration of learning outcomes across interpersonal, interpretive, and presentational modes of communication. Accomplish real-world communicative tasks in culturally appropriate ways and gain familiarity with products, practices, and perspectives of the target culture(s). Use grammar, vocabulary, and structures for meeting functional performance goals at this level and to build a foundation for continued language learning. Perform better and stronger in the Intermediate range. A few abilities emerge in the Advanced range.

Prerequisite(s): SPN 2111 with a grade of C or higher, or demonstrated proficiency in indicated area of study Global Awareness.

Terms Offered: Spring

**(STT) STATISTICS****STT 2640 Elementary Statistics I (3)**

Contact hours (3.60 total): 2.40 lecture, 1.20 lab

Introduction to statistical techniques and methodology, including terminology, sample methods, descriptive statistics, data analysis, data relationships, elementary set theory, elementary probability, random variables, binomial distribution, contingency tables, and estimation; with a laboratory exploration of probabilistic and statistical concepts, and compilation of routine statistical computations. [Note: Online sections require that exams be taken at an approved proctoring site.]

Prerequisite(s): MTH 0550 or MTH 0750 with a grade of C or higher

Pre/Corequisite(s): MTH 0550, if a grade of C or higher has not been earned in MTH 0750, and ENG 0980 with a grade of C or higher.

Lab Fee: \$0.00

Terms Offered: Fall, Spring, Summer

**STT 2650 Elementary Statistics II (2)**

Contact hours (2.40 total): 1.60 lecture, 0.80 lab

Application of statistical techniques and methodology, sampling theory, design of experiments, correlation and regression, hypothesis testing, and analysis of variance; with a computer laboratory exploration of statistical concepts, computation of statistical parameters, and analysis of statistical significance. [Note: Online sections require that exams be taken at an approved proctoring site.]

Prerequisite(s): STT 2640 with a grade of C or higher

Lab Fee: \$0.00

Terms Offered: Fall, Spring, Summer

**(SWK) SOCIAL WORK****SWK 1100 Introduction to Social Work (3)**

Contact hours (3 total): 3 lecture

Introduction to the profession: historical development, value base, social systems perspective on social problems, and major fields of practice. Includes required knowledge, skills and values; critical thinking; problem solving; self-awareness; and appreciation of racial, ethnic, and cultural pluralism.

Pre/Corequisite(s): ENG 1111

Terms Offered: Fall, Spring

### **SWK 1105 Chemical Dependency I: Pharmacology and Physiology of Psychoactive Substances (3)**

Contact hours (3 total): 3 lecture

Pharmacology of psychoactive substances including physiological and psychological effects and their propensity for addiction. Identification of basic treatment theories and treatment and prevention strategies in the field of addictions.

Prerequisite(s): ENG 0980

Terms Offered: Fall, Spring

### **SWK 1110 Peer Support Fundamentals I (4)**

Contact hours (6.75 total): 4.5 lecture, 2.25 lab

Paraprofessional training for individuals with lived experience in mental health issues and/or substance use recovery to work with populations of the same to promote stability and long-term recovery. Knowledge and training in methods of engagement, process of recovery, and ethical concerns. Utilization of concepts from the I-Best model to develop basic skills.

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **SWK 1112 Family Peer Support Fundamentals (4)**

Contact hours (4 total): 4 lecture

Training for individuals to become certified as Family Peer Support Specialists.

Prerequisite(s): Student must complete application and interview.

Instructor Permission Required.

Lab Fee: \$50.00

Terms Offered: Fall, Spring

### **SWK 1122 Social Work Methods and Procedures (3)**

Contact hours (3 total): 3 lecture

Conceptual framework of generalist social work practice model. Creative problem solving, social work values, ethics, and principles related to interventions with individuals, groups, organizations, and communities. Exposure to different theoretical perspectives. Motivational interviewing techniques.

Pre/Corequisite(s): SWK 1100 or instructor permission

Lab Fee: \$50.00

Terms Offered: Fall, Spring

### **SWK 1136 Affective Education and Group Treatment (3)**

Contact hours (3 total): 3 lecture

Intrapersonal and interpersonal communication skills. Emphasis on personal growth and development. Group treatment model. Various group types, functions, and processes.

Pre/Corequisite(s): SWK 1100 or SWK 1105

Terms Offered: Spring

### **SWK 2205 Chemical Dependency II: Assessment, Diagnosis, and Treatment Strategies (3)**

Contact hours (3 total): 3 lecture

Theories of addiction. Treatment and prevention models and strategies with abusive/addicted populations.

Counseling techniques and strategies used in individual, group, and family approaches to addictions treatment. Concepts and practices of assessment, diagnosis, and treatment planning.

Prerequisite(s): ENG 1111

Pre/Corequisite(s): SWK 1105

Lab Fee: \$50.00

Terms Offered: Fall, Spring

### **SWK 2215 Chemical Dependency III: Co-Occurring Disorders of Addiction and Mental Health (3)**

Contact hours (3 total): 3 lecture

Study of the population presenting with both substance abuse/addiction and mental health symptoms. History, definitions, symptomatology, assessment, and treatment strategies of Co-Occurring Disorders (COD).

Prerequisite(s): ENG 1111, SWK 1105, or instructor permission

Terms Offered: Spring

### **SWK 2218 Social Work and Mental Health (3)**

Contact hours (3 total): 3 lecture

Social work practice serving individuals with mental health issues. Overview of the service systems and treatment approaches.

Prerequisite(s): ENG 1111

Terms Offered: Fall

### **SWK 2225 Chemical Dependency IV: Service Coordination (3)**

Contact hours (3 total): 3 lecture

Application of Service Coordination Domain of Competency to include intake, orientation, pre-screening, and documentation

Pre/Corequisite(s): SWK 1105 and SWK 2205

Terms Offered: Spring

### **SWK 2230 Introduction to Social Welfare (3)**

Contact hours (3 total): 3 lecture

Social welfare policy process through history, development, and organization of social welfare and social work.

Pre/Corequisite(s): ENG 1112, SWK 1100, or instructor permission

Terms Offered: Fall

### **SWK 2260 Multicultural Competence in a Diverse World (3)**

Contact hours (3 total): 3 lecture

Introduction to the knowledge, skills, and processes required to develop a cultural competency. Historical development of discrimination. Need for cultural competency within the U.S. and international communities in the delivery of health and human services practices.

Prerequisite(s): SWK 1100 or SWK 1105

Terms Offered: Fall, Spring

### **SWK 2261 Introduction to Prevention (3)**

Contact hours (3 total): 3 lecture

Introduction to the field of prevention, focusing on strategies and principles that promote health, safety, and well-being while reducing risks for individuals, families, and communities. Exploration of key concepts, theories, and practices used in prevention science, including evidence-based approaches to addressing public health challenges such as substance use, mental health disorders, violence, and chronic diseases.

Prerequisite(s): ENG 1111

Terms Offered: Spring



**SWK 2270 Addictions and Recovery Practicum I (2)**

Practicum placement of 240 clock hours with an addictions and/or co-occurring disorders treatment agency under professional supervision. Development of professional skills as outlined in the eight Domains of Competency as required by the State of Ohio Chemical Dependency Professionals Licensing Board. Includes skills such as screening, assessment, and documentation. Prerequisite(s): SWK 2205  
Instructor Permission Required.  
Terms Offered: Fall, Spring, Summer

**SWK 2271 Social Services Practicum I (2)**

Practicum placement of 210 hours in local social service agency under professional supervision. Development of professional social work skills, integration of social work theories and skill-based training and professional social work documentation. Prerequisite(s): SWK 1122  
Corequisite(s): SWK 2291  
Instructor Permission Required.  
Student Liability Fee: \$20.00  
Terms Offered: Fall, Spring, Summer

**SWK 2272 Social Services Practicum II (2)**

Practicum placement of 210 hours in local social service agency under professional supervision. Development of professional social work skills, integration of social work theories and skill-based training and professional social work documentation. Prerequisite(s): SWK 1122  
Corequisite(s): SWK 2292  
Instructor Permission Required.  
Student Liability Fee: \$20.00  
Terms Offered: Fall, Spring, Summer

**SWK 2274 Addiction and Recovery Practicum II (5)**

Practicum placement of 500 clock hours with an addictions and/or co-occurring disorders treatment agency under professional supervision. Development of professional skills as outlined in the Domains of Competency as required by the State of Ohio Chemical Dependency Professionals Licensing Board. Includes skills such as engagement, assessment, and treatment planning. Prerequisite(s): SWK 2273 and SWK 2293  
Corequisite(s): SWK 2294  
Instructor Permission Required.  
Student Liability Fee: \$20.00  
Terms Offered: Fall, Spring, Summer

**SWK 2275 Addiction and Recovery Practicum III (5)**

Practicum placement of 500 clock hours with an addictions and/or co-occurring disorders treatment agency under professional supervision. Development of professional skills as outlined in the Domain of Competency as required by the State of Ohio Chemical Dependency Professionals Licensing Board. Includes skills such as assessment, treatment planning, and service coordination. Prerequisite(s): SWK 2274 and SWK 2294  
Corequisite(s): SWK 2295  
Instructor Permission Required.  
Student Liability Fee: \$20.00  
Terms Offered: Fall, Spring, Summer

**SWK 2276 Addiction and Recovery Practicum IV (5)**

Practicum placement of 500 clock hours with an addictions and/or co-occurring disorders treatment agency under professional supervision. Development of professional skills as outlined in the Domains of Competency as required by the State of Ohio Chemical Dependency Professionals Licensing Board. Includes skills such as assessment, education, and counseling. Prerequisite(s): SWK 2275 and SWK 2295  
Corequisite(s): SWK 2296  
Instructor Permission Required.  
Student Liability Fee: \$20.00  
Terms Offered: Fall, Spring, Summer

**SWK 2291 Social Services Seminar I (1)**

Contact hours (1 total): 1 lecture  
The first of two courses designed to provide a forum for student shared learning and problem solving involving their practicum placements. Integrate the practicum experience and social work theory in a classroom setting. Prerequisite(s): SWK 1122  
Corequisite(s): SWK 2271  
Instructor Permission Required.  
Terms Offered: Fall, Spring, Summer

**SWK 2292 Social Services Seminar II (1)**

Contact hours (1 total): 1 lecture  
The second of two courses designed to provide a forum for student shared learning and problem solving involving practicum placements. Will integrate the practicum experience and social work theory in a classroom setting. Prerequisite(s): SWK 1122  
Corequisite(s): SWK 2272  
Instructor Permission Required.  
Terms Offered: Fall, Spring, Summer

**SWK 2293 Addiction and Recovery Seminar I (1)**

Shared learning and problem solving involving practicum placements. Integration of the practicum experience and behavioral health/addictions theory. Development of professional skills as outlined in the Domains of Competency as required by the State of Ohio Chemical Dependency Professionals Licensing Board. Includes skills such as screening, assessment, and documentation. Prerequisite(s): SWK 1105 and SWK 2205  
Corequisite(s): SWK 2273  
Instructor Permission Required.  
Terms Offered: Spring, Summer

**SWK 2294 Addiction and Recovery Seminar II (1)**

Shared learning and problem solving involving practicum placements. Integration of practicum experience and behavioral health/addictions theory. Development of professional skills as outlined in the Domains of Competency as required by the State of Ohio Chemical Dependency Professionals Licensing Board. Includes skills such as engagement, assessment, and treatment planning. Prerequisite(s): SWK 2273 and SWK 2293  
Corequisite(s): SWK 2274  
Instructor Permission Required.  
Terms Offered: Fall, Spring, Summer



**SWK 2295 Addiction and Recovery Seminar III (1)**

Shared learning and problem solving involving practicum placements. Integration of the practicum experience and behavioral health/addictions theory. Development of professional skills as outlined in the Domains of Competency as required by the State of Ohio Chemical Dependency Professionals Licensing Board. Includes, but not limited to skills such as assessment, treatment planning, and service coordination.

Prerequisite(s): SWK 2274 and SWK 2294

Corequisite(s): SWK 2275

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

**SWK 2296 Addiction and Recovery Seminar IV (1)**

Shared learning and problem solving involving practicum placement. Integration of the practicum experience and behavioral health/addictions theory. Development of professional skills as outlined in the Domains of Competency as required by the State of Ohio Chemical Dependency Professionals Licensing Board. Includes skills as assessment, education, and counseling.

Prerequisite(s): SWK 2275 and SWK 2295

Corequisite(s): SWK 2276

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

**SWK 3210 Qualified Mental Health Professional (QMHP) (4)**

Contact hours (4 total): 4 lecture

Assessment, crisis intervention, case management, and other therapeutic skills required toward Qualified Mental Health Professional certification.

Instructor Permission Required.

Terms Offered: Spring

**SWK 3235 Trauma and Crisis Intervention (3)**

Contact hours (3 total): 3 lecture

Crisis and trauma as triggers for substance use disorders and other associated mental health symptoms; treatment methods.

Prerequisite(s): ENG 1111 and SWK 1136

Instructor Permission Required.

Terms Offered: Fall, Spring

**SWK 3236 Advanced Techniques in Treatment Group Practices (3)**

Contact hours (3 total): 3 lecture

Planning, delivering, and evaluating treatment group settings; methods and progress.

Prerequisite(s): ENG 1111 and SWK 1136

Instructor Permission Required.

Terms Offered: Fall, Spring

**SWK 3305 Advanced Assessment, Screening, and Treatment Planning (4)**

Contact hours (5 total): 3 lecture, 2 lab

Advanced skills in core competency areas of therapeutic care for clients with substance use disorders and mental health issues.

Prerequisite(s): SWK 2205

Instructor Permission Required.

Terms Offered: Fall

**SWK 3330 Special Populations I: Gender, Poverty, and Corrections (3)**

Contact hours (3 total): 3 lecture

Stigmas and biases related to gender, poverty, and corrections in U.S. culture. Impact on and barriers to the treatment of Substance Use Disorders (SUDs) and Co-Occurring Disorders (CODs).

Prerequisite(s): SWK 1105 and SWK 2205

Instructor Permission Required.

Terms Offered: Fall, Spring

**SWK 4310 Treatment Techniques (4)**

Contact hours (4 total): 3 lecture, 1 lab

Demonstrate application of therapeutic techniques across various theoretical perspectives

Pre/Corequisite(s): SWK 2205

Instructor Permission Required.

Terms Offered: Fall

**SWK 4315 Co-Occurring Disorder Treatment: Mental Health (3)**

Contact hours (3 total): 3 lecture

Demonstrate building knowledge of symptoms and treatments for mental health issues as they present in co-occurring disorder diagnoses

Pre/Corequisite(s): SWK 2205

Instructor Permission Required.

Terms Offered: Fall

**SWK 4320 Families and Co-Occurring Disorders (3)**

Contact hours (4 total): 3 lecture, 1 lab

Examine the effects of Addiction and Mental Health Issues on family systems.

Instructor Permission Required.

Terms Offered: Fall

**SWK 4335 Special Populations II: Disabilities & Geriatrics (3)**

Contact hours (3 total): 3 lecture

Examine the effects of addiction and mental health on the disabilities and geriatric populations.

Instructor Permission Required.

Terms Offered: Spring

**SWK 4350 Capstone (3)**

Contact hours (3 total): 3 lecture

Research in addiction studies. Advocacy for treatment issues.

Prerequisite(s): SWK 3305

Instructor Permission Required.

Terms Offered: Spring

**SWK 4371 Addiction & Recovery Practicum V (3)**

Field placement. Development of supervisory skills.

Corequisite(s): SWK 4391

Instructor Permission Required.

Terms Offered: Fall

**SWK 4391 Addiction & Recovery Seminar V (1)**

Support for field placement. Development of supervisory skills.

Corequisite(s): SWK 4371

Instructor Permission Required.

Terms Offered: Fall

## (THE) THEATRE

### THE 1101 Acting Practicum I (1)

Experience in acting in a live, Clark State Theatre Arts production.

Instructor Permission Required.

Terms Offered: Fall, Spring

### THE 1102 Acting Practicum II (1)

Continued acting experience in a live, Clark State Theatre Arts production.

Instructor Permission Required.

Terms Offered: Fall, Spring

### THE 1111 Stagecraft I (3)

Contact hours (4 total): 2 lecture, 2 lab

Introduction to the areas of technical theatre with a strong emphasis on scenery construction techniques. Tools, materials, hardware, and basic approaches to building and painting scenery for the stage. Hands-on experiences and lectures culminating in the final class project of building and painting the Theatre Program's fall production.

Pre/Corequisite(s): ENG 0980 with a grade of C or higher

Lab Fee: \$45.00

Terms Offered: Fall, Spring

### THE 1112 Stagecraft II (3)

Contact hours (4 total): 2 lecture, 2 lab

Continuation of Stagecraft I with special emphasis on advanced scenic and painting techniques, reading working drawings, and the basics of scenic design. Hands-on experiences and lectures culminating in the final class project of building and painting the Theatre Program's spring production.

Prerequisite(s): THE 1111

Lab Fee: \$45.00

Terms Offered: Fall, Spring

### THE 1121 Theatre Technology Practicum I (1)

Experience in using theatre technology in a live, Clark State Theatre Arts production.

Instructor Permission Required.

Terms Offered: Fall, Spring

### THE 1122 Theatre Technology Practicum II (1)

Continued theatre technology experience in a live, Clark State Theatre Arts production.

Instructor Permission Required.

Terms Offered: Fall, Spring

### THE 1130 Theatre Appreciation (3)

Contact hours (3 total): 3 lecture

Exploration of the artists, the plays, and the history that has shaped today's theatre. [Note: Online sections require students to attend one live performance during the semester.]

Pre/Corequisite(s): ENG 0980 with a grade of C or higher  
Global Awareness.

Terms Offered: Fall, Spring

### THE 1133 Script Analysis (3)

Contact hours (3 total): 3 lecture

Introduction to script analysis: identifying plot, structure, action, themes, and application to the stage.

Pre/Corequisite(s): ENG 1111

Terms Offered: Spring

### THE 2000 Entertainment Lighting Technology (3)

Contact hours (4 total): 2 lecture, 2 lab

Study of stage lighting techniques, fixtures, circuiting, dimmers, lighting consoles, and automated fixtures.

Hands-on experience in hanging lights from a light plot; running a follow spot for a professional performance; programming a lighting console; programming moving lights set to music; creating the light plot, paperwork, and paper cues for a single-set interior production.

Prerequisite(s): THE 1111

Pre/Corequisite(s): THE 1112

Terms Offered: Fall

### THE 2001 Entertainment Audio Technology (3)

Contact hours (4 total): 2 lecture, 2 lab

Theory and practice of sound reinforcement, effects, and design for indoor and outdoor stage. Audio equipment and systems; recording techniques and operation of sound for live performance. Hands-on experience in sound design and installation.

Prerequisite(s): THE 1111

Pre/Corequisite(s): THE 1112

Terms Offered: Spring

### THE 2002 Entertainment Technology Troubleshooting (3)

Contact hours (4 total): 2 lecture, 2 lab

Study of audio, video, and lighting systems as used in entertainment venues with focus on challenges and implementing solutions.

Prerequisite(s): THE 1111

Pre/Corequisite(s): THE 1112

Terms Offered: Fall

### THE 2003 Entertainment Electricity and Rigging Technology (3)

Contact hours (4 total): 2 lecture, 2 lab

Study and application of industry safety standards and procedures in electrical and rigging equipment.

Prerequisite(s): THE 1111

Pre/Corequisite(s): THE 1112

Terms Offered: Spring

### THE 2103 Acting Practicum III (1)

Improve acting skills experience in a live, Clark State Theatre Arts production.

Instructor Permission Required.

Terms Offered: Fall, Spring

### THE 2104 Acting Practicum IV (1)

Advanced acting experience in a live, Clark State Theatre Arts production.

Instructor Permission Required.

Terms Offered: Fall, Spring

### THE 2123 Theatre Technology Practicum III (1)

Improve theatre technology skills experience in a live, Clark State Theatre Arts production.

Instructor Permission Required.

Terms Offered: Fall, Spring

### THE 2124 Theatre Technology Practicum IV (1)

Advanced theatre technology skills experience in a live, Clark State Theatre Arts production.

Instructor Permission Required.

Terms Offered: Fall, Spring, Summer

### **THE 2201 Acting I (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Basic training and practice in vocal, physical, and creative processes used by the actor for the stage, emphasis on character development and scoring techniques.  
Pre/Corequisite(s): ENG 1111  
Terms Offered: Fall

### **THE 2202 Acting II (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Continuation of actor training for the stage. Increased emphasis on character development, scoring, and styles.  
Prerequisite(s): THE 2201  
Terms Offered: Spring

### **THE 2205 Acting Practicum V (2)**

Advanced acting experience in a live, Clark State Theatre Arts production in a leading role.  
Instructor Permission Required.  
Terms Offered: Fall, Spring

### **THE 2225 Theatre Technology Practicum V (2)**

Advanced theatre technology skills experience in a live, Clark State Theatre Arts production in a responsible role.  
Instructor Permission Required.  
Terms Offered: Fall, Spring, Summer

### **THE 2230 Theatre Management (3)**

Contact hours (3 total): 3 lecture  
Organization and operation of the theatre including staff, funding, ticket sales, marketing, and grant writing. Offered Fall, even numbered years.  
Prerequisite(s): THE 1130  
Terms Offered: Fall

### **THE 2235 Stage Management (3)**

Contact hours (3 total): 3 lecture  
Stage management responsibilities including; rehearsal and performance document preparation; and the development of organizational skills. Offered Fall, odd numbered years.  
Pre/Corequisite(s): THE 1130  
Terms Offered: Fall

### **THE 2240 Basics of Theatre Design (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Preliminary concepts of set, lighting, sound, and costume design for live theatre, including history of theatrical presentation and motivation for design concepts.  
Terms Offered: Fall

### **THE 2241 Theatre History I (3)**

Contact hours (3 total): 3 lecture  
Survey of the history and development of theatrical production from Ancient Greece through Neoclassical France. Emphasis on play production rather than literature. Representative plays studied.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.  
Terms Offered: Fall

### **THE 2242 Theatre History II (3)**

Contact hours (3 total): 3 lecture  
Survey of the history and development of theatrical production from Restoration through the present. Emphasis on play production rather than literature. Representative plays studied.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher Global Awareness.  
Terms Offered: Spring

### **THE 2280 Directing (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Introduction to the art and techniques of directing for the stage, including visual storytelling, script analysis, and working with actors.  
Prerequisite(s): THE 1130  
Terms Offered: Spring

### **THE 2282 Co-Op Education (3)**

Contact hours (1 total): 1 lecture  
Apply classroom studies in a technical theatre workplace.  
Prerequisite(s): THE 1111 and THE 1112  
Terms Offered: Fall, Spring, Summer

## **(WDD) WEB DESIGN AND DEVELOPMENT**

### **WDD 3100 User Interface Design (3)**

Contact hours (4 total): 2 lecture, 2 lab  
User interface prototyping and mockup. Creation of site maps and wireframes. Principles of web typography. Responsive Design and Mobile First Design strategy. Use of industry standard software for prototyping.  
Prerequisite(s): NWM 1005 and NWM 1610 and ITS 1500  
Lab Fee: \$125.00  
Terms Offered: Fall

### **WDD 3200 HTML and CSS II (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Advanced coding skills based on web standards and semantic markup. Cross-browser testing for desktop and mobile. Use framework to create responsive grid system. Advanced application of Cascading Style Sheets (CSS). Utilize CSS preprocessors.  
Prerequisite(s): CSD 1600  
Lab Fee: \$50.00  
Terms Offered: Fall

### **WDD 3300 Web Analytics and SEO (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Data research collection, analysis, and reporting to inform the web design process. Search Engine Optimization (SEO) techniques and use of Google Analytics and Google Search Console.  
Prerequisite(s): WDD 3100 and WDD 3200  
Terms Offered: Spring

### **WDD 3400 JavaScript for Web Development (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Use best practices in writing secure JavaScript and jQuery code. Includes use of JavaScript tools Node.js, AJAX (Asynchronous JavaScript and XML), and JSON (JavaScript Object Notation). Use of JavaScript frameworks, such as Vue, React, and Angular. Introduction to JavaScript ES6, and object-oriented JavaScript. Attention to professional practices, such as using an IDE (integrated development environment), consistent coding styles for readability and maintainability, and version control such as git.  
Prerequisite(s): CSD 1600  
Lab Fee: \$30.00  
Terms Offered: Fall

### **WDD 3500 Python for Web Development (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Python data structures such as lists, dictionaries, and sets. Object-oriented programming. Use the Internet as a source of data. Scrape, parse, and read web data as well as access data using web APIs. Work with HTML, XML, and JSON data formats in Python. Attention to professional practices, such as using an IDE (integrated development environment), consistent coding styles for readability and maintainability, and version control such as git.  
Prerequisite(s): CSD 1600 and WDD 3400  
Instructor Permission Required.  
Lab Fee: \$30.00  
Terms Offered: Spring

### **WDD 3600 Server-side Programming and Database (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Programming on the web server to interact with relational and non-relational database management systems like MySQL and Mongo. Work with and create APIs (Application Programming Interfaces). Create and use a testing environment for web server programming and database development.  
Prerequisite(s): CSD 1300, CSD 1310, CSD 2521, and WDD 3400  
Lab Fee: \$30.00  
Terms Offered: Spring

### **WDD 3700 Web Design and Development Internship (3)**

Contact hours (1 total): 1 lecture  
Practical application of web design and development skills in a professional workplace. Reflection on internship experience. Development of interview skills, self-promotion skills, and professional image.  
Prerequisite(s): WDD 3100, WDD 3200, WDD 3300, WDD 3400, WDD 3500, and WDD 3600  
Terms Offered: Summer

### **WDD 4300 User Experience Design (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Usability research techniques and consulting. Usability analysis to inform Web redesign recommendations. Mobile device usability testing. Content strategy and information architecture. Web accessibility review and enhancement.  
Prerequisite(s): WDD 3100  
Lab Fee: \$125.00  
Terms Offered: Fall

### **WDD 4600 Web Server Interaction (3)**

Contact hours (4 total): 2 lecture, 2 lab  
SaaS (Software as a Service) platforms such as Azure, VMWare, and AWS (Amazon Web Services). Server configurations such as Nginx and Apache. Linux command line interface. Security considerations. Professional practices for testing and releasing application updates on a web server.  
Prerequisite(s): WDD 3400 and WDD 3600  
Lab Fee: \$30.00  
Terms Offered: Fall

### **WDD 4700 Senior Project I (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Design and development of a web application from user specifications through deployment. Project selection, planning, selection of appropriate tools, designing, development, and peer review. Professional practices such as agile development, task prioritization, version control, and documentation.  
Prerequisite(s): WDD 3700  
Pre/Corequisite(s): WDD 4600  
Lab Fee: \$30.00  
Terms Offered: Fall

### **WDD 4710 Senior Project II (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Continuation of Senior Project I. Focus on the completion of the project. Iterative development based on presentations and feedback. Usability testing. Peer review of projects. Test and debug. Implementation and deployment on a web server. Professional practices such as agile development, task prioritization, version control, and documentation.  
Prerequisite(s): WDD 4700  
Lab Fee: \$30.00  
Terms Offered: Spring

### **WDD 4800 Web Design and Development Capstone (3)**

Contact hours (4 total): 2 lecture, 2 lab  
Web design and development solutions for local companies or community organizations. Application of technical skills learned. Portfolio shell preparation.  
Prerequisite(s): WDD 3700, WDD 4300, WDD 4600, and WDD 4700  
Lab Fee: \$75.00  
Terms Offered: Spring

## **(WLD) WELDING**

### **WLD 1000 Introduction to Welding Processes (3)**

Contact hours (5 total): 2 lecture, 3 lab  
An introduction to the fundamentals of equipment used in oxyacetylene and arc welding, including welding and cutting safety. Skill development in oxyacetylene brazing, cutting, and plasma cutting.  
Pre/Corequisite(s): ENG 0980 with a grade of C or higher and AGR 1100 or ENT 1000  
Lab Fee: \$150.00  
Terms Offered: Fall, Spring, Summer

### **WLD 1010 Gas Metal and Flux Cored Arc Welding (GMAW/FCAW) (3)**

Contact hours (7 total): 1 lecture, 6 lab  
Introduction to Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW) process. Perform GMAW and FCAW in the flat, horizontal, vertical, and overhead position. Emphasis on power source, electrode wire selection, various joint designs, and troubleshooting techniques. Qualification standards and acceptance criteria will be provided in accordance with American Welding Society, Schools Excelling through National Skills Education, AWS QC10, Specification for Qualification and Certification of SENSE Level 1 - Entry Welders.  
Prerequisite(s): WLD 1000 or Instructor Permission  
Lab Fee: \$150.00  
Certification Fee: \$20.00  
Terms Offered: Fall, Spring

### **WLD 1020 Shielded Metal Arc Welding (SMAW) (3)**

Contact hours (7 total): 1 lecture, 6 lab

Introduction to the Shielded Metal Arc Welding (SMAW) process. Perform SMAW in the flat, horizontal, vertical, and overhead position. Emphasis placed on power sources, electrode selection, various joint designs, and troubleshooting techniques. Qualification standards and acceptance criteria will be provided in accordance with American Welding Society, Schools Excelling through National Skills Education. AWS QC10, Specification for Qualification and Certification of SENSE Level 1 - Entry Welders.

Prerequisite(s): WLD 1000 or Instructor Permission

Lab Fee: \$150.00

Certification Fee: \$20.00

Terms Offered: Fall, Spring

### **WLD 1030 Gas Tungsten Arc Welding (GTAW) (3)**

Contact hours (7 total): 1 lecture, 6 lab

Introduction to the principles of Gas Tungsten Arc Welding (GTAW), setup and safe use of GTAW equipment. Perform GTAW in the flat, horizontal, vertical, and overhead positions. Emphasis on power source, tungsten selection, various joint designs, and troubleshooting techniques. Qualification standards and acceptance criteria will be provided in accordance with American Welding Society, Schools Excelling through National Skills Education. AWS QC10, Specification for Qualification and Certification of SENSE Level 1 - Entry Welders.

Prerequisite(s): WLD 1000

Lab Fee: \$150.00

Certification Fee: \$20.00

Terms Offered: Fall, Spring



