2022–2023 Program & Course Catalog

Hawkeye Community College Accreditation

The Higher Learning Commission

230 South LaSalle Street, Suite 7-500
Chicago, IL 60604
800-621-7440 or 312-263-0456

2021 Assurance Review

- Higher Learning Commission Letter
  - www.hawkeyecollege.edu/webres/File/about/accreditation/higher-learning-commission-letter-2021.pdf
- Higher Learning Commission Final Report
  - www.hawkeyecollege.edu/webres/File/about/accreditation/higher-learning-commission-final-report-2021.pdf
- Assurance Argument
  - www.hawkeyecollege.edu/webres/File/about/accreditation/higher-learning-commission-assurance-argument-2021.pdf

2016 Reports

- Comprehensive Quality Review Report
  - www.hawkeyecollege.edu/webres/File/about/accreditation/comprehensive-quality-review-report-2016.pdf
- Systems Portfolio
  - www.hawkeyecollege.edu/webres/File/about/accreditation/systems-portfolio-2016.pdf
- Systems Appraisal Feedback Report
  - www.hawkeyecollege.edu/webres/File/about/accreditation/systems-appraisal-feedback-report-2016.pdf
- Quality Highlights Report — 2016
  - www.hawkeyecollege.edu/webres/File/about/accreditation/quality-highlights-report-2016.pdf
- Federal Compliance Filing by Institutions Form — September 2016
  - www.hawkeyecollege.edu/webres/File/about/accreditation/federal-compliance-9-2016.pdf

Follow-Up Reports

- Higher Learning Commission Interim Report
  - www.hawkeyecollege.edu/webres/File/about/accreditation/higher-learning-commission-interim-report-2019.pdf
- Higher Learning Commission Interim Report: Staff Analysis of Institutional Report
  - www.hawkeyecollege.edu/webres/File/about/accreditation/higher-learning-commission-interim-report-staff-analysis-of-institutional-report-2019.pdf

Additional Locations

- Change Panels Action Letter June 7, 2019
  - www.hawkeyecollege.edu/webres/File/about/accreditation/change-panels-action-letter-06-07-2019.pdf
- Additional Location Confirmation Report Form letter — November 2011
  - www.hawkeyecollege.edu/webres/File/about/accreditation/additional-location-confirmation-visit-report-form-letter-2011.pdf

Iowa Department of Education

Grimes State Office Building
400 E. 14th and Grand
Des Moines, IA 50319-0146

Comprehensive Accreditation Visit, 2020

- 2020 Approval Letter
  - www.hawkeyecollege.edu/webres/File/about/accreditation/IDOE-comprehensive-accreditation-visit-approval-letter.pdf
- 2020 Visit Report
  - www.hawkeyecollege.edu/webres/File/about/accreditation/IDOE-comprehensive-accreditation-visit-report.pdf

Interim Accreditation Visit, 2015

- 2015 Approval Letter
  - www.hawkeyecollege.edu/webres/File/about/accreditation/Iowa-doe-interim-accreditation-visit-approval-letter.pdf
- 2015 Report
  - www.hawkeyecollege.edu/webres/File/about/accreditation/Iowa-doe-interim-accreditation-visit-report.pdf

National Alliance of Concurrent Enrollment Partnerships (NACEP)

179 East Franklin Street
PO Box 578
Chapel Hill, NC 27514
919-593-5205
877-572-8693 (fax)

- Certificate of Accreditation — 2019
  - www.hawkeyecollege.edu/webres/File/about/accreditation/NACEP-certificate-2019.pdf
- Accreditation Letter — 2019
  - www.hawkeyecollege.edu/webres/File/about/accreditation/NACEP-accreditation-letter-2019.pdf
- Accreditation Commission Findings — 2019
  - www.hawkeyecollege.edu/webres/File/about/accreditation/NACEP-accreditation-commission-findings-2019.pdf

Individual programs are recognized as follows:

Dental Assisting and Dental Hygiene

Accredited by the Commission on Dental Accreditation
American Dental Association
211 East Chicago Ave.
PO Box 1900
Chicago, IL 60611
www.ada.org/en/coda

Emergency Medical Services

Accredited by the Commission on Accreditation of Allied Health Education Programs
9355 - 113th St. N, #7709
Seminole, FL 33775
727-210-2350
www.caahep.org

Accredited by Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions
8301 Lakeview Parkway, Suite 111-312
Rowlett TX 75088
214-703-8445
214-703-8992 (fax)
www.coaemsp.org

Iowa Department of Public Health
Lucas State Office Building
321 E. 12th Street
Des Moines, IA 50319-0075
515-281-7689
idph.iowa.gov

Landscape and Turf Management

Accredited by the National Association of Landscape Professionals
12500 Fair Lakes Circle, Suite 200
Fairfax, VA 22033
800-395-2522
www.landscapeprofessionals.org/nalp/nalp/membership/accredited-schools.aspx

Medical Assistant

The Hawkeye Community College Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs
25400 US Highway 19 North, Suite 158
Clearwater, FL 33763
727-210-2350
www.caahep.org

Medical Laboratory Technology

Accredited by the National Accrediting Agency for Clinical Laboratory Sciences
5600 N River Rd. STE 720
Rosemont, IL 60018-5119
www.naacls.org/Find-a-Program.aspx?state=Iowa&program=MLT

Natural Resource Management

North American Wildlife Technology Association
Jennifer Lee
Forestry, Wildlife, and Natural Resources Program
Front Range Community College
4616 S Shields St
Fort Collins, CO 80526 USA
jennifer.lee@frontrange.edu
970-204-8253
www.nawta.org/untitled

Occupational Therapy Assistant

Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA)

6116 Executive Boulevard, Suite 200
North Bethesda, MD 20852-4929
301-652-2682
www.acoteonline.org

Physical Therapist Assistant Program

The Physical Therapist Assistant program at Hawkeye Community College is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE), 111 North Fairfax Street, Alexandria, Virginia 22314; telephone: 703-706-3245; email: accreditation@apta.org; website: www.capteonline.org.

Practical Nursing and Associate Degree Nursing

Approved by the Iowa Board of Nursing
400 S.W. 8th Street
Suite B
Des Moines, IA 50309
nursing.iowa.gov/lpnadn-nursing-education-programs

Respiratory Care

Accredited by the Commission on Accreditation for Respiratory Care
264 Precision Blvd
Telford, TN 37690
817-283-2835
www.coarc.com

Equal Opportunity

Hawkeye Community College is committed to maintaining an educational and work environment in which students, faculty, and staff can work together in an atmosphere free of discrimination, harassment, exploitation, or intimidation.

Hawkeye Community College is an equal opportunity and affirmative action employer, committed to equity and diversity in its educational services and employment practices.

Nondiscrimination Statement

Hawkeye Community College does not discriminate on the basis of sex; race; age; color; creed; national origin; religion; disability; sexual orientation; gender identity; genetic information; political affiliation; or actual or potential parental, family, or marital status in its programs, activities, or employment practices. Veteran status is also included to the extent covered by law. Any person alleging a violation of equity regulations shall have the right to file a formal complaint. Inquiries concerning application of this statement should be addressed to: Equity Coordinator and Title IX Coordinator for employees, 319-296-4405; or Title IX Coordinator for students, 319-296-4448; Hawkeye Community College, 1501 East Orange Road, P.O. Box 8015, Waterloo, Iowa 50704-8015; or email equity-titleIX@hawkeyecollege.edu, or the Director of the Office for Civil Rights U.S. Department of Education, John C. Kluczynski Federal Building, 230 S. Dearborn Street, 37th Floor, Chicago, IL 60604-7204, Telephone: (312) 730-1560 Facsimile: (312) 730-1576, TDD 800-877-8339 Email: OCR.Chicago@ed.gov.

Affirmative Action Plan

Hawkeye Community College has established and implemented an Affirmative Action Plan (www.hawkeyecollege.edu/about/diversity-inclusion/equal-opportunity/affirmative-action-plan) to reflect its ethical and legal pledge to comply with laws and regulations requiring Equal Educational Opportunity, Equal Employment Opportunity, and Affirmative Action.

Educational Equity Statement

Hawkeye Community College is committed to equity and diversity in educational services and employment practices.

College curriculum, programs, and services will promote respect and appreciation for cultural diversity and inclusion with an awareness of the rights and responsibilities of individuals as members of a global society.

College employees have a responsibility to contribute to an environment for learning and working that encourages and enhances the valuing of equity, enthusiasm for diversity, and passion for respectful interaction.

Hawkeye Community College is committed to maintaining an educational and work environment in which students, faculty, and staff can work together in an atmosphere free of discrimination, harassment, exploitation, or intimidation.

Hawkeye Community College has developed and implemented an Affirmative Action Plan to demonstrate an ethical and legal commitment to Equal Employment Opportunity. The Plan is designed to advance the representation and utilization of protected class members and to prevent discrimination. The Plan is periodically reviewed and revised in an evolving process to continually and optimally promote equity in educational services and employment practices at Hawkeye Community College.

Hawkeye Community College does not discriminate on the basis of sex; race; age; color; creed; national origin; religion; disability; marital status; sexual orientation; gender identity; genetic information; political affiliation or belief in its employment practices; educational programs and activities; admission procedures; outreach and recruitment; counseling and guidance; testing; selection, placement, appointment, and referral; or promotion/retention. Veteran status in educational

programs, activities, employment practices, or admission procedures is also included to the extent covered by law. In addition, discrimination and/or retaliation of or against an individual because of an association with someone with an aforementioned protected characteristic or for reporting discrimination is also prohibited. Prohibited forms of sex-based discrimination include sexual harassment, sexual assault, and sexual exploitation, as well as domestic violence, dating violence, and stalking.

Any person has the right to file a complaint alleging non-compliance by Hawkeye Community College with College, State, or Federal policies or regulations requiring non-discrimination in educational services and employment.

Inquiries or complaints related to this Educational Equity Statement may be made to:

Equity coordinator and Title IX coordinator for employees, Hawkeye Community College 1501 East Orange Road, Waterloo, IA 50701, 319-296-4405 or 800-670-4769, ext. 4405

Title IX coordinator for students, Hawkeye Community College, 1501 East Orange Road, Waterloo, IA 50701, 319-296-4448, or 800-670-4769, ext. 4448

LIBERAL ARTS DEGREE REQUIREMENTS AND TRANSFER MAJORS

Liberal Arts Transfer Plan

Hawkeye's Liberal Arts Transfer plan allows you to complete the first two years of a bachelor's degree. A variety of liberal arts core (general education) and elective courses are offered from a wide range of disciplines to prepare students to transfer to a public or private four-year college or university.

Associate of Arts (AA)

The Associate of Arts in Liberal Arts degree enables you to meet most general education requirements and be admitted as a junior at most four-year colleges and universities.

Associate of Science (AS)

The Associate of Science in Liberal Arts degree enables you to focus your education on math or science fields, meet most general education requirements, and be admitted as a junior at most four-year colleges and universities.

Due to the nature of sequential courses, you must work with a Hawkeye academic advisor for major-specific transfer information and to register for classes.

Flexible Class Schedule

The Liberal Arts Transfer plan is designed to be flexible with classes offered during the day, evening, and online. You can complete your AA degree entirely online, in the evening, during the day, or with a combination of these options.

Transfer Information

Hawkeye has established articulation agreements with many four-year public and private colleges within Iowa. You should work closely with a program advisor to ensure courses transfer and you meet program requirements. During your first year, contact the Admissions office at the college you plan to transfer to and obtain specific program and transfer requirements.

Transfer Majors

Choosing a transfer major will help you in the selection of your courses if you know what four-year degree you would like to pursue. If you are undecided, it may help you determine if a major or career track is the right choice.

- Biology (AS)
- Business (AA)
- Chemistry (AS)
- Communication (AA)
- Criminal Justice (AA)
- Early Childhood (AA)
- Elementary Education (AA)
- Exercise Science & Kinesiology (AA)
- Fine Arts (AA)
- History (AA)
- Human and Family Services (AA)
- Political Science (AA)
- Psychology (AA)
- Social Work (AA)
- Sociology (AA)

Program Outcomes

Students taking liberal arts courses at Hawkeye are not only equipped with a strong foundation for most programs offered by four-year colleges or universities, but they are also able to develop attitudes, values, and skills that will allow them to become constructive adults, both individually and within their communities.

Students receiving an Associate of Arts or Associate of Science degree from Hawkeye will have developed the following skills:

- **Communication:** Students will develop speaking, writing, reading, and listening skills.
- **Critical Thinking and Problem Solving:** Students will acquire, evaluate, and analyze information; develop sound reasoning skills; and apply the principles of the scientific method.
- **Quantitative Reasoning:** Students will develop skills in problem-solving, logical thinking, and application of mathematical processes.
- **Community and Global Awareness:** Students will recognize and appreciate diversity, historical viewpoints, and the global perspective.
- **Individual Development:** Students will cultivate ethical values, personal wellness, and personal learning strategies.
- **Artistic Expression:** Students will acquire a global and cultural understanding of the role of the arts, instilling the personal curiosity and skills for creative expression and endeavors.
- **Information Management:** Students will apply technological methods to retrieve, process, and communicate information.

Liberal Arts Core Coursework

I. Natural Science and Mathematics

A. Biological Sciences: Establishes a framework of key concepts that deal with health issues, ethical controversies, social responsibility, and environmental quality. The laboratory experience allows the student to be introduced to the process of science.

B. Physical Sciences: Explores the chemical and physical nature of our universe. The laboratory experience introduces the student to the world of scientific technology.

C. Mathematics: Establishes an understanding of various mathematical concepts, such as finances, statistics, algebra, and geometry so that students can use them effectively in their lives.

II. Humanities

A. Western Civilization: Provides the framework for the common origins and meaning of European and American ways of life by studying their development throughout history.

B1. Humanities—Literature and Fine Arts: Introduces dynamic and holistic ways of viewing the human condition.

B2. Humanities—Philosophy and Religion: Provides a basis of concepts and values that have influenced numerous cultures around the world.

B3. Humanities—Non-Western Cultures: Raises awareness of other cultures, including their diverse economic, political, family, and religious structures.

III. Social Sciences

A. People and Their Relationships: Provides a foundation for understanding mental processes, individual behavior, and social interaction.

B. American Society: Explores the evolution of U.S. government and society and the meaning of these developments to today's world.

C. Other Social Sciences: Examines the impact of time, place, and major life events on individual behavior and social interaction.

IV. Communications

A. Written Communications: Enhances student ability to study and scrutinize issues while also broadening their reading and writing skills.

B. Oral Communications: Explores ways to improve critical thinking, idea articulation, public speaking, and attentive listening in order to increase understanding and productivity.

V. Social Diversity

Considers ideas of difference and inequality in contemporary U.S. society.

VI. Elective Courses

Courses beyond general education requirements. May include courses from any Category I, II, III or V. Up to 16 technical credit hours may be used as electives.

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

2015-PRESENT ASSOCIATE OF ARTS (AA) DEGREE TRACKING FORM (62 Credits)

FLEXIBLE SCHEDULING - Courses are offered face to face, during the day, in the evening, online, or in a hybrid format (part online, part face to face). Course offerings change semester by semester. For the upcoming semester's offerings, students should check the course search in My Hawkeye.
PLANNING A CLASS SCHEDULE - Work with a program advisor to select courses, make a transfer plan, and review progress toward degree completion.

I. NATURAL SCIENCE AND MATHEMATICS — 10 Credits (minimum)

Requires one course from each area - A, B, and C. Need 7 credits from A and B, including one 4-credit science laboratory course.

A. BIOLOGICAL SCIENCES

__	BIO105 Introductory Biology		4
__	BIO112 General Biology I *(Fall Only)*		4
__	BIO113 General Biology II *(Spring Only)*		4
__	BIO154 Human Biology	E O	3
__	BIO163 Essentials of Anatomy and Physiology	E	4
__	BIO166 Fundamentals of Anatomy and Physiology		4
__	BIO168 Human Anatomy and Physiology I	E	4
__	BIO186 Microbiology	E	4

B. PHYSICAL SCIENCES

__	CHM122 Introduction to General Chemistry (P)	E	4
__	CHM165 General Chemistry I (P) *(Fall Only)*		4
__	ENV115 Environmental Science ***	E O	3
__	ENV116 Environmental Science Lab *** (C)	O	1
__	GEO131 Physical Geography	O	3
__	GEO132 Physical Geography Lab (C)		1
__	PHS120 Exploring Physical Science (P) *(Spring Only)*		4
__	PHS142 Principles of Astronomy (P)		3
__	PHS152 Astronomy (P)	E	4
__	PHY162 College Physics I (P) *(Fall Only)*		4
__	PHY212 Classical Physics I (P)		5

C. MATHEMATICS (Assessment Required) — 3 Credits (minimum)

__	MAT110 Math for Liberal Arts (P)	E O	3
__	MAT121 College Algebra (P)		4
__	MAT128 Precalculus (P)		4
__	MAT134 Trigonometry and Analytical Geometry (P)		3
__	MAT156 Statistics (P)	E O	3
__	MAT210 Calculus I (P)		4

II. HUMANITIES — 9 Credits (minimum)

A. WESTERN CIVILIZATION — 3 Credits (minimum)

__	HIS117 Western Civilization I: Ancient and Medieval	E O	3
__	HIS118 Western Civilization II: Early Modern	O	3
__	HIS119 Western Civilization III: The Modern Period	E O	3

B. HUMANITIES — 6 Credits (minimum)

Requires one course from two different areas - 1, 2, or 3.

1. LITERATURE AND FINE ARTS

__	ART101 Art Appreciation	O	3
__	ART203 Art History I		3
__	ART204 Art History II *(Spring Only)*		3
__	DRA107 Theatrical Arts and Society	O	3
__	LIT101 Introduction to Literature (P)	O	3
__	MUS100 Music Appreciation	O	3

2. PHILOSOPHY AND RELIGION

__	PHI101 Introduction to Philosophy	O	3
__	PHI105 Introduction to Ethics	O	3
__	REL101 Survey of World Religions	O	3
__	REL130 Introduction to Religions of the East	O	3

3. NON-WESTERN CULTURES

__	CLS130 African Cultures *	O	3
__	CLS141 Middle Eastern History and Culture *		3
__	CLS150 Latin American History and Culture *	O	3
__	CLS160 East Asian Cultures *	O	3
__	CLS164 Japanese History and Culture *		3
__	CLS172 Russian Civilization *	E	3

III. SOCIAL SCIENCES — 9 Credits (minimum)

Requires one course from each area - A, B, and C.

A. PEOPLE AND THEIR RELATIONSHIPS

__	PSY111 Introduction to Psychology	E O	3
__	SOC110 Introduction to Sociology	E O	3

B. AMERICAN SOCIETY

__	HIS151 U.S. History to 1877	O	3
__	HIS152 U.S. History Since 1877	E O	3
__	POL111 American National Government	E O	3

C. TOPICS IN SOCIAL SCIENCES

__	GEO121 World Regional Geography	O	3
__	POL121 International Relations		3
__	POL125 Comparative Government and Politics		3
__	PSY121 Developmental Psychology	O	3
__	PSY251 Social Psychology (P) *(Spring Only)*		3
__	SOC115 Social Problems	O	3
__	SOC120 Marriage and Family	O	3
__	SOC135 Death and Dying	O	3
__	SOC208 Introduction to Cultural Anthropology *(Spring Only)*		3
__	SOC220 Sociology of Aging		3

IV. COMMUNICATIONS — 9 Credits (minimum)

A. WRITTEN COMMUNICATIONS (Assessment Required) — 6 Credits (required)

__	ENG105 Composition I (P)	E O	3
__	ENG106 Composition II (P)	E O	3

B. ORAL COMMUNICATIONS — 3 Credits (required)

__	SPC101 Fundamentals of Oral Communication	E O	3

V. SOCIAL DIVERSITY — 3 Credits (minimum)

__	COM148 Diversity and the Media		3
__	EDU223 Multicultural Education (P) (For Education Emphasis)		3
__	LIT133 Minority Voices in U.S. Literature	O	3
__	PSY262 Psychology of Gender (P)	O	3
__	SOC200 Minority Group Relations	O	3
__	SOC205 Diversity in America	E O	3
__	WST101 Women's Studies		3

SUCCESS COURSES TAKEN OR TO BE TAKEN:

__ PAL Referral: ___ Writing ___ Reading ___Math
__ Accuplacer retest or Faculty Writing Sample

__	MAT-045	Fundamentals of Math (4)
__	MAT-048	Preparatory Math for Elementary Algebra (4)
__	MAT-052	Pre-Algebra (3)
__	MAT-063	Elementary Algebra (4)
__	RDG-ONE	College Preparatory Reading I (3)
__	RDG-039	College Preparatory Reading II (3)
__	RDG-040	College Preparatory Reading III (3)
__	ENG-060	College Preparatory Writing I (3)
__	ENG-061	College Preparatory Writing II (3)

These will not apply toward the 62 credits needed to graduate.

KEY

*	Meets the Non-Western Cultures requirement at UNI.
**	Repeatable: see course description for number of times.
***	CNS121 or ENV115/116 - only one can be taken toward the 7 credits of science.
****	No credit if ECN120 or ECN130 is earned.
(P)	Must complete a prerequisite.
(C)	Must take a corequisite.
E	May be offered in the evening. In My Hawkeye, search for classes after 5:00 p.m.
O	May be offered online. In My Hawkeye, search for WEB in course location.

2015-PRESENT ASSOCIATE OF ARTS (AA) DEGREE TRACKING FORM (62 Credits)

VI. ELECTIVE COURSES — 22 Credits (minimum)

A. REQUIRED ELECTIVE COURSE — 1 Credit (minimum)

__	SDV108	The College Experience	E O	1
__	SDV109	College 101		3

B. SUGGESTED ELECTIVE COURSES FOR LIBERAL ARTS — 21 Credits (minimum)

Electives are courses beyond general education requirements. May include courses from any area - I, II, III, or V. Up to 16 technical credits may be used as electives. Additional courses may be available. For more information, contact an advisor.

__	ACC131	Principles of Accounting I (P)	E O	4
__	ACC132	Principles of Accounting II (P)	E O	4
__	ART120	2-D Design		3
__	ART123	3-D Design		3
__	ART133	Drawing *(Fall Only)*		3
__	ART134	Drawing II *(Spring Only)*		3
__	ART143	Painting		3
__	ART144	Painting II		3
__	ART173	Ceramics		3
__	ART174	Ceramics II		3
__	ART184	Photography		3
__	BIO151	Nutrition	E O	3
__	BIO173	Human Anatomy and Physiology II (P)	E	4
__	BIO269	Foodology		3
__	BUS102	Introduction to Business	E O	3
__	BUS180	Business Ethics	E O	3
__	BUS183	Business Law	E O	3
__	BUS210	Business Statistics (P)	O	3
__	BUS230	Quantitative Methods for Business Decision Making (P)		3
__	CHM132	Introduction to Organic and Biochemistry (P)		4
__	CHM175	General Chemistry II (P) *(Spring Only)*		4
__	CHM260	Organic Chemistry I (P)		3
__	CHM270	Organic Chemistry II (P)		3
__	COM140	Introduction to Mass Media *(Fall Only)*		3
__	COM150	ETC: Art and Literary Magazine		3
__	COM152	ETC: Art & Literary Magazine (Spring Only)		2
__	CRJ100	Introduction to Criminal Justice	O	3
__	CRJ120	Introduction to Corrections	O	3
__	CRJ200	Criminology (also SOC240)	O	3
__	CRJ201	Juvenile Delinquency (also SOC230)	O	3
__	CRJ233	Probation, Parole, and Community Based Corrections (P)	O	3
__	CRJ316	Juvenile Justice (P)	O	3
__	CRJ317	White Collar Crime (P)	O	3
__	CRJ318	Crime Analysis (P)		3
__	CRJ320	Criminal Justice Ethics	O	3
__	CSC110	Introduction to Computers (P)	E O	3
__	CSC116	Information Computing (P)	O	3
__	DRA110	Introduction to Film	O	3
__	DRA130	Acting I *(Fall Only)*		3
__	ECN110	Introduction to Economics**** *(Fall Only)*		3
__	ECN120	Principles of Macroeconomics (P)	O	3
__	ECN130	Principles of Microeconomics (P)	O	3
__	EDU130	Home, School, and Community Relations	O	3
__	EDU210	Foundations of Education		3
__	EDU235	Children's Literature	O	3
__	EDU240	Educational Psychology (P) (C)		3
__	EDU246	Including Diverse Learners	O	3
__	EDU255	Technology in the Classroom (P) *(Spring Only)*		3
__	EDU901	Academic Service Learning Experience **		1
__	EDU920	Field Experience (C)	O	1
__	ENG221	Creative Writing		3
__	ENG230	Creative Writing: Fiction		3
__	ENG235	Playwriting and Screenwriting		3
__	FLS131	Elementary Spanish I *(Fall Only)*		3
__	FLS132	Elementary Spanish II (P) *(Spring Only)*		3
__	FLS231	Intermediate Spanish I (P)		3
__	FLS232	Intermediate Spanish II (P)		3
__	HIS201	Iowa History		3
__	HIS204	Rock to Hip-Hop – A History		3
__	HIS257	African American History	O	3
__	HUM140	Shakespeare: Dramatist, Psychologist, Historian		3
__	HUM141	Tolkien: Mythology and Methodology		3
__	HSV109	Introduction to Human Services		3
__	LIT160	Short Story/Novel		3
__	LIT189	Women and Literature	O	3
__	LIT949	Special Topics in Literature		1-3
__	MAT102	Intermediate Algebra (P)		4
__	MAT117	Math for Elementary Teachers (P) *(Spring Only)*		3
__	MAT216	Calculus II (P)		4
__	MAT219	Calculus III (P)		4
__	MGT101	Principles of Management	E O	3
__	MIL103	Military Survival Skills		2
__	MIL110	Intro. to Army and Critical Thinking (ROTC @ UNI)		1
__	MIL115	Intro. to Profession of Arms (ROTC @ UNI)		1
__	MIL121	Leadership and Decision Making (ROTC @ UNI)		2
__	MIL122	Army Doctrine Team Leadership (ROTC @ UNI)		2
__	MKT110	Principles of Marketing	O	3
__	MUA101	Applied Voice		1
__	MUA106	Class Voice **		1
__	MUA120	Applied Piano **		1-2
__	MUA121	Applied Piano II **		2
__	MUA180	Applied Percussion I		1
__	MUA181	Applied Percussion II		1
__	MUS102	Music Fundamentals *(Spring Only)*		3
__	MUS154	Chorus **		1
__	MUS202	World Music	E	3
__	PEA102	Aerobic Fitness I **		1
__	PEA117	Bowling I **		1
__	PEA123	Circuit Training **		1
__	PEA125	Indoor Cycling **		1
__	PEA150	Powerwalking **	O	1
__	PEA187	Weight Training I **		1
__	PEA191	Pilates **	O	1
__	PEA194	Vinyasa Yoga **	O	1
__	PEC110	Coaching Ethics, Techniques, and Theory	O	1
__	PEC115	Athletic Development and Human Growth	O	1
__	PEC123	Anatomy for Coaching	O	1
__	PEC127	Care and Prevention of Athletic Injuries		2
__	PEH111	Personal Wellness	O	3
__	PEH141	First Aid **		2
__	PEH191	Sports Nutrition		3
__	PEH161	Fundamentals of Health Coaching		3
__	PEH162	Intro. to Physical Education		3
__	PEH266	Leadership Techniques for Fitness Programs		3
__	PEH909	Cooperative Education	O	1
__	PHI121	Classical and Medieval Philosophy		3
__	PHY100	Physics in Everyday Life		3
__	PHY172	College Physics II (P)		4
__	PHY222	Classical Physics II (P)		5
__	PSY241	Abnormal Psychology (P)	O	3
__	PSY261	Human Sexuality (also SOC261)		3
__	SDV131	Career Exploration	O	2
__	SOC160	Introduction to Social Work	E	3
__	SOC180	Social Work Interactional Skills *(Spring Only)*		3
__	SOC181	Field Experience (Social Work) *(Spring Only)*	O	1
__	SOC850	Cultural Immersion Field Experience **		1-3
__	SPC112	Public Speaking *(Spring Only)*		3
__	SPC120	Intercultural Communication *(Fall Only)*	O	3
__	SPC122	Interpersonal Communication *(Spring Only)*		3
__	SPC132	Group Communication (P) *(Fall Only)*		3
__	SPC140	Oral Interpretation *(Spring Only)*		3

2017-2021 ASSOCIATE OF SCIENCE (AS) DEGREE TRACKING FORM (62 Credits)

PLANNING A CLASS SCHEDULE - Work with a program advisor to select courses, make a transfer plan, and review their progress toward degree completion.

I. NATURAL SCIENCE AND MATHEMATICS — 20 Credits (minimum)

Requires one course from the Natural Science including a lab and one course from Mathematics. Requires completion of one 2-course science or mathematics sequence. Students must work with their advisor to determine the math and science sequence needed to transfer to the program and university of choice.

A. NATURAL SCIENCE — As Advised, See Advisor

__ BIO112 General Biology I		4
__ BIO113 General Biology II		4
__ BIO168 Human Anatomy and Physiology I	E	4
__ BIO173 Human Anatomy and Physiology II (P)	E	4
__ BIO186 Microbiology	E	4
__ CNS121 Environmental Conservation ***		3
__ CHM165 General Chemistry I (P)		4
__ CHM175 General Chemistry II (P)		4
__ CHM260 Organic Chemistry I (P)		3
__ CHM270 Organic Chemistry II (P)		3
__ ENV115 Environmental Science ***	E O	3
__ ENV116 Environmental Science Lab *** (P) or (C)	E	1
__ GEO131 Physical Geography		3
__ GEO132 Physical Geography Lab (P) or (C)		1
__ PHS152 Astronomy (P)	E	4
__ PHY162 College Physics I (P)		4
__ PHY172 College Physics II (P)		4
__ PHY212 Classical Physics I (P)		5
__ PHY222 Classical Physics II (P)		5

B. MATHEMATICS (Assessment Required) — 3 Credits (minimum)

__ MAT121 College Algebra (P)		4
__ MAT128 Precalculus (P)		4
__ MAT134 Trigonometry and Analytical Geometry (P)		3
__ MAT156 Statistics (P)	E O	3
__ MAT210 Calculus I (P)		4
__ MAT216 Calculus II (P)		4
__ MAT219 Calculus III (P)		4

II. HUMANITIES — 3 Credits (minimum)

Requires one course from A, B, C, or D.

A. WESTERN CIVILIZATION

__ HIS117 Western Civilization I: Ancient and Medieval	E O	3
__ HIS118 Western Civilization II: Early Modern	O	3
__ HIS119 Western Civilization III: The Modern Period	E O	3

B. LITERATURE AND FINE ARTS

__ ART101 Art Appreciation	O	3
__ ART203 Art History I	O	3
__ ART204 Art History II	O	3
__ DRA107 Theatrical Arts and Society	O	3
__ LIT101 Introduction to Literature	E O	3
__ MUS100 Music Appreciation	E O	3

C. PHILOSOPHY AND RELIGION

__ PHI101 Introduction to Philosophy	O	3
__ PHI105 Introduction to Ethics	O	3
__ REL101 Survey of World Religions	O	3
__ REL130 Introduction to Religions of the East	O	3

D. NON-WESTERN CULTURES

__ CLS130 African Cultures	O	3
__ CLS141 Middle Eastern History and Culture	E	3
__ CLS150 Latin American History and Culture	E O	3
__ CLS160 East Asian Cultures	O	3
__ CLS164 Japanese History and Culture		3
__ CLS172 Russian Civilization	E	3

III. SOCIAL SCIENCES — 6 Credits (minimum)

Requires one course from each area – A and B.

A. PEOPLE AND THEIR RELATIONSHIPS — 3 Credits (minimum)

__ PSY111 Introduction to Psychology	E O	3
__ SOC110 Introduction to Sociology	E O	3

B. AMERICAN SOCIETY — 3 Credits (minimum)

__ HIS151 U.S. History to 1877	O	3
__ HIS152 U.S. History Since 1877	E O	3
__ POL111 American National Government	E O	3

IV. COMMUNICATIONS — 9 Credits (minimum)

A. WRITTEN COMMUNICATIONS (Assessment Required) — 6 Credits (required)

__ ENG105 Composition I (P)	E O	3
__ ENG106 Composition II (P)	E O	3

B. ORAL COMMUNICATIONS — 3 Credits (required)

__ SPC101 Fundamentals of Oral Communication	E O	3

V. SOCIAL DIVERSITY — 3 Credits (minimum)

__ COM148 Diversity and the Media		3
__ EDU223 Multicultural Education (for education majors only)		3
__ LIT133 Minority Voices in U.S. Literature	O	3
__ PSY262 Psychology of Gender (P)	E O	3
__ SOC200 Minority Group Relations	O	3
__ SOC205 Diversity in America	E O	3
__ WST101 Women's Studies	O	3

VI. DISTRIBUTED REQUIREMENT — 4 Credits (minimum)

Select 4 credits from categories I, II, III, IV, or V.

SUCCESS COURSES TAKEN OR TO BE TAKEN:

- __ PAL Referral: ___ Writing ___ Reading ___Math
- __ Accuplacer retest or Faculty Writing Sample
- __ MAT045 Fundamentals of Math (4)
- __ MAT048 Preparatory Math for Elementary Algebra (4)
- __ MAT052 Pre-Algebra (3)
- __ MAT063 Elementary Algebra (4)
- __ RDG038 College Preparatory Reading I (3)
- __ RDG039 College Preparatory Reading II (3)
- __ RDG040 College Preparatory Reading III (3)
- __ ENG060 College Preparatory Writing I (3)
- __ ENG061 College Preparatory Writing II (3)

These will not apply toward the 62 credits needed to graduate.

KEY

- ** Repeatable: see course description for number of times.
- *** CNS121 or ENV115/116 - only one can be taken toward the 20 credits of science.
- (P) Must complete a prerequisite.
- (C) Must take a corequisite.
- E May be offered in the evening. In My Hawkeye, search for classes after 5:00 p.m.
- O May be offered online. In My Hawkeye, search for WEB in course location.

For additional information contact:

319-296-4014

https://www.hawkeyecollege.edu/programs/liberal-arts/courses-as

HAWKEYE COMMUNITY COLLEGE

Updated June 2021

2017-2021 ASSOCIATE OF SCIENCE (AS) DEGREE TRACKING FORM (62 Credits)

VI. ELECTIVE COURSES — 17 Credits (minimum)

A. REQUIRED ELECTIVE COURSE — 1 Credit (minimum)

__ SDV108	The College Experience	E O	1
__ SDV109	College 101		

B. SUGGESTED ELECTIVE COURSES FOR THE LIBERAL ARTS AA DEGREE — 16 Credits (minimum)

Electives are courses beyond general education requirements. May include courses from any area - I, II, III, or V. Up to 16 technical credits may be used as electives. Additional courses may be available. For more information, contact a program advisor.

__ ACC131	Principles of Accounting I (P)	E O	4
__ ACC132	Principles of Accounting II (P)	E O	4
__ AGA114	Principles of Agronomy		3
__ AGA154	Fundamentals of Soil Science		3
__ AGA214	Cash Grains		3
__ AGA284	Pesticide Application Certification		3
__ AGA376	Integrated Pest Management		3
__ AGB101	Agricultural Economics		3
__ AGB235	Introduction to Agriculture Markets		3
__ AGB303	Agriculture Leadership		3
__ AGB331	Entrepreneurship in Agriculture		3
__ AGB336	Agricultural Selling		3
__ AGC103	Ag Computer		3
__ AGH112	Introduction to Turfgrass Management		2
__ AGH119	Herbaceous Plant Materials		2
__ AGH161	Irrigation Systems		3
__ AGH211	Advanced Turfgrass Management		3
__ AGH221	Principles of Horticulture		3
__ AGH280	Botany for Horticulture		3
__ AGP333	Precision Farming Systems		3
__ AGP401	Introduction to GIS Software (P)		1
__ AGP450	Fundamentals of GIS		3
__ AGS113	Survey of the Animal Industry		3
__ AGS211	Issues Facing Animal Science		2
__ AGS218	Domestic Animal Physiology (P)		4
__ AGS272	Foods of Animal Origin (P)		5
__ AGS305	Livestock Evaluation		3
__ AGS319	Animal Nutrition		3
__ AGT805	Employment Experience		5
__ AGV123	Companion Animal		3
__ ART120	2-D Design		3
__ ART123	3-D Design		3
__ ART133	Drawing		3
__ ART134	Drawing II		3
__ ART143	Painting		3
__ ART144	Painting II		3
__ ART173	Ceramics		3
__ ART184	Photography		3
__ BCA201	Introduction to Information Systems		3
__ BIO151	Nutrition	E O	3
__ BIO163	Essentials of Anatomy & Physiology	E	4
__ BUS102	Introduction to Business	E O	3
__ BUS180	Business Ethics	E O	3
__ BUS183	Business Law	E O	3
__ BUS210	Business Statistics (P)	E O	3
__ BUS230	Quantitative Methods for Business Decision Making (P)		3
__ COM140	Introduction to Mass Media		3
__ CSC110	Introduction to Computers (P)	E O	3
__ DRA110	Introduction to Film	E O	3
__ ECN110	Introduction to Economics (No credit if ECN120 or ECN130 is earned.)		3
__ ECN120	Principles of Macroeconomics (P)	E O	3
__ ECN130	Principles of Microeconomics (P)	E O	3
__ ENG221	Creative Writing		3
__ FLS151	Elementary Spanish I		5
__ FLS152	Elementary Spanish II (P)		5
__ FLS241	Intermediate Spanish I (P)		4
__ FLS242	Intermediate Spanish II (P)		4
__ HIS201	Iowa History		3
__ HIS251	U.S. History 1945 to Present (P)		3
__ HIS257	African American History		3
__ HIS277	History of Women in the U.S. (P)		3
__ HUM140	Shakespeare: Dramatist, Psychologist, Historian		3
__ LIT189	Women and Literature	O	3
__ LIT949	Special Topics in Literature		1-3
__ MAT102	Intermediate Algebra (P)		4
__ MGT101	Principles of Management	E O	3
__ MIL103	Military Survival Skills		2
__ MIL110	Leadership and Personal Development		1
__ MIL115	Foundations in Tactical Leadership		1
__ MIL120	Innovative Team Leadership		2
__ MIL122	Leadership in Changing Environment		2
__ MKT110	Principles of Marketing	E O	3
__ PEA102	Aerobic Fitness I **		1
__ PEA117	Bowling I **		1
__ PEA123	Circuit Training **		1
__ PEA125	Indoor Cycling **		1
__ PEA150	Powerwalking **	O	1
__ PEA176	Volleyball I **		1
__ PEA187	Weight Training I **		1
__ PEA191	Pilates **	O	1
__ PEA194	Vinyasa Yoga **	O	1
__ PEA196	Iron Yoga - Pilates Infusion **		1
__ PEC110	Coaching Ethics, Techniques, and Theory	O	1
__ PEC115	Athletic Development and Human Growth	O	1
__ PEC123	Anatomy for Coaching	O	1
__ PEC127	Care and Prevention of Athletic Injuries		2
__ PEH111	Personal Wellness	O	3
__ PEH141	First Aid **		2
__ PEH162	Intro. to Physical Education		3
__ PEH193	Sports Nutrition		2
__ PHI121	Classical and Medieval Philosophy		3
__ PHY100	Physics in Everyday Life		3
__ POL121	International Relations		3
__ POL125	Comparative Government and Politics		3
__ PSY121	Developmental Psychology	O	3
__ PSY241	Abnormal Psychology (P)	O	3
__ PSY251	Social Psychology (P)		3
__ PSY261	Human Sexuality (also SOC261)		3
__ SDV127	Study Strategies		1
__ SDV131	Career Exploration		2
__ SOC115	Social Problems	O	3
__ SOC120	Marriage and Family	O	3
__ SOC135	Death and Dying	E O	3
__ SOC160	Introduction to Social Work	E	3
__ SOC195	Urban Studies (P)		3
__ SOC208	Cultural Anthropology		3
__ SOC220	Sociology of Aging		3
__ SOC850	Cultural Immersion Field Experience **		1-3
__ SPC120	Intercultural Communication	O	3
__ SPC122	Interpersonal Communication		3
__ SPC132	Group Communication (P)		3
__ XXX924	Honors Project		1-3
__ XXX926	Honors Seminar		3

Biology Liberal Arts Transfer Major

Award	Associate of Science (AS)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

The biology transfer major will allow you to transfer to a public or private four-year college or university to earn a degree in biology. Consider biology if you are interested in research with industry or government, primary or secondary school teaching, or entering advanced degree programs for practice in health professions such as medicine, dentistry, or physical therapy.

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆ General education course.

► Course has a prerequisite and/or corequisite.

Biology Transfer Courses		
BIO-112	General Biology I	4
BIO-113	General Biology II	4
CHM-165	General Chemistry I ►	4
CHM-175	General Chemistry II ►	4
MAT-210	Calculus I ►	4
		Total Credits 20

Remaining Liberal Arts Coursework	
II. Humanities	3
III. Social Sciences	6
IV. Communications	9
V. Social Diversity	3
VI. Distributed Requirement	4
VII. Elective Courses	17
	Total Credits 42

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Business Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	64
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

Students will take about half of the business core needed for a four-year degree, depending on their individual situation and incoming coursework. Students will learn about accounting, economics, management information systems, quantitative analysis, and potentially marketing. Upon completion, these courses transfer directly to a four-year university.

At the community college level, and specifically here at Hawkeye Community College, we have the advantage of being able to offer more assistance to our students as our focus is not on research and publications as it is at the university level. Our instructors are generally more available during office hours and outside of them. We also have a dedicated peer tutoring lab with our top-vetted students. One-on-one zoom tutoring is also always an option.

And finally, community college instructors have a greater amount of real industry experience which is incorporated into your coursework. That vocational experience and continued professional development by our faculty ensures that your learning is lining up well with industry expectations. Our primary goal is to prepare you as well as we can for your future career and employers!

Why Choose a Business Career?

Unless your career goals are specialized, such as health, law, electrician, plumber, etc., a business education suits most people. Most people will either work for a business or start one. Students will learn better professional problem solving, communication, and teamwork skills.

Transfer Information

Our student services area ensures that you are taking the correct courses for a seamless transfer to your ultimate four-year destination. We work with the three Regent universities within the state of Iowa, namely: University of Northern Iowa, University of Iowa, and Iowa State University. Each has slightly different preparation needs. We also work with private colleges, such as Upper Iowa, in making that transition smooth.

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Business Transfer Courses				
ACC-131	Principles of Accounting I ►		4	
ACC-132	Principles of Accounting II ►		4	
BUS-183	Business Law		3	
BUS-210	Business Statistics ► -OR-	E	3	◆
BUS-230	Quantitative Methods for Business Decision Making ►	E	3	◆
CSC-116	Information Computing ►		3	
ECN-120	Principles of Macroeconomics ►		3	
ECN-130	Principles of Microeconomics ►		3	
MAT-156	Statistics ►		3	
			Total Credits 26	

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics A. Biological Sciences B. Physical Sciences	7
II. Humanities	9
III. Social Sciences	9
IV. Communications	9
V. Social Diversity	3
VII. Elective Courses A. Required Elective Course	1
	Total Credits 38

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Chemistry Liberal Arts Transfer Major

Award	Associate of Science (AS)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

The chemistry transfer major will allow you to transfer to a public or private four-year college or university to earn a degree in chemistry. Consider chemistry if you are interested in research with industry or government, secondary school teaching, or entering advanced degree programs for practice in some health professions.

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆ General education course.

► Course has a prerequisite and/or corequisite.

Chemistry Transfer Courses	
CHM-165 General Chemistry I ►	4
CHM-175 General Chemistry II ►	4
CHM-260 Organic Chemistry I ►	3
CHM-270 Organic Chemistry II ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
	Total Credits 22

Remaining Liberal Arts Coursework	
II. Humanities	3
III. Social Sciences	6
IV. Communications	9
V. Social Diversity	3
VI. Distributed Requirement	4
VII. Elective Courses	15
	Total Credits 40

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Communication Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

A degree in communication prepares students for a variety of careers. Students who study communication are not only highly sought after in fields like marketing and public relations but also in areas you may not immediately think of, such as banking. Communication majors are known for being skillful at taking complex information and making it easy to understand, as well as their ability to connect with others. This makes them highly sought after in many fields.

Career Opportunities

The following is just a sampling of some of the career opportunities you can pursue with a degree in communications — the sky's the limit!

- Marketing
- Public Relations
- Advertising
- Media
- Writing
- Mass Communication
- Advertising
- Banking
- Real Estate
- Teaching/Training
- Healthcare
- Technology

You may find employment in many industries such as government, business, not-for-profit organizations, education, manufacturing, and politics.

Why You Should Pick a Degree in Communications: www.degreequery.com/pick-degree-communications

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Communication Transfer Courses		
COM-140	Introduction to Mass Media	3
ENG-105	Composition I ►	3
SPC-101	Fundamentals of Oral Communication	3
SPC-120	Intercultural Communications *Offered fall semester, even years*	3
SPC-122	Interpersonal Communication *Offered spring term, even years*	3
SPC-132	Group Communication *Offered fall term, odd years*	3
		Total Credits 18

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics	10
II. Humanities	9
III. Social Sciences	9
IV. Communications	3
V. Social Diversity	3
VII. Elective Courses	10
	Total Credits 44

Additional Communication Transfer Courses		
COM-148	Diversity and the Media	3
DRA-130	Acting I *Offered fall semester*	3
SPC-112	Public Speaking *Offered spring semester, odd years*	3
SPC-140	Oral Interpretation *Offered spring semester*	3

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Criminal Justice Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

TV shows like CSI, SVU, SWAT, NCIS, and Criminal Minds have captivated audiences worldwide. Their popularity has created a high level of interest for careers in the growing field of criminal justice with a need for individuals possessing skills in computers, science, technology, psychology, and social sciences.

Those who study criminal justice can work in public service in a number of different ways:

- Like biology? Become a lab technician and help solve crimes using DNA, fingerprints, and evidence analysis.
- Like computers? Become a forensic computer investigator and help find children who are trafficked, solve financial crimes, and track criminal enterprises.
- Like psychology? Become an investigator specializing in interview, interrogation, and profiling.
- Like social work? Become a forensic child interviewer and work with Juvenile Court Services or become a victim's advocate or a probation officer.
- Do you have a history of substance abuse and now want to help others kick the habit? You can start your degree here and work toward the treatment sector.

We need ethical people who want to make a difference in our society. We need people like you who are interested in being part of the next generation of criminal justice professionals.

Whether you are just finishing high school or looking for a career change, Hawkeye's Criminal Justice transfer major will start you on your path to earn a Bachelor's Degree in criminal justice.

Join us to see how your unique skills can be used to serve in the field of criminal justice.

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Criminal Justice Transfer Courses		
CRJ-100	Introduction to Criminal Justice	3
CRJ-200	Criminology	3
CRJ-201	Juvenile Delinquency	3
MAT-156	Statistics ►	3
POL-111	American National Government	3
SOC-110	Introduction to Sociology	3
	Criminal Justice Elective	3
	Criminal Justice Elective	3
	Total Credits	**24**

Criminal Justice Electives		
CRJ-120	Introduction to Corrections	3
CRJ-141	Criminal Investigation ►	3
CRJ-233	Probation, Parole, Community-Based Corrections ►	3
CRJ-237	Criminal and Constitutional Law	3
CRJ-316	Juvenile Justice ►	3
CRJ-317	White Collar Crime ►	3
CRJ-318	Crime Analysis ►	3
CRJ-320	Criminal Justice Ethics	3

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics — A. Biological Sciences -OR-	4
I. Natural Science and Mathematics — A. Biological Sciences	3
I. Natural Science and Mathematics — B. Physical Sciences -OR-	3
I. Natural Science and Mathematics — B. Physical Sciences	4
II. Humanities	9
III. Social Sciences — C. Topics in Social Sciences	3
IV. Communications	9
V. Social Diversity	3
VI. Elective Courses — A. Required Elective Course	1
VI. Elective Courses — B. Suggested Elective Courses	6
	Total Credits 38

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Your Criminal History Matters

As a future criminal justice professional, students need to use good judgment in all areas of their personal, professional, and scholastic interactions and activities; and must keep their records clean. Criminal justice organizations require background checks for internships, volunteer placements, and employment; which will include adult and juvenile civil and criminal issues, official and informal contacts with police, and character references. Employment will also hinge on the successful completion of a polygraph, credit check, and psychological evaluation.

Be aware that character counts and your behavior can sabotage your ability to graduate from this program and your ability to work in the field. Consider what your actions and criminal history says about you….i.e. an OWI conviction indicates that you demonstrate poor judgment by drinking to excess and deciding to drive, which may kill or injure you or another person. Remember your personal behaviors (what you didn't get caught for) will be revealed during the polygraph, and what you do privately (when no one is watching or supervising) speaks volumes as to the true content of one's character.

If you want to work in criminal justice avoid these issues:

- Acquiring speeding tickets or safety violation citations.
- Acquiring a suspended driver's license or citations for driving with a suspended license.
- Participating in underage drinking, using fake ID's, or buying alcohol for underage persons.
- Use or abuse of prescription drugs, street drugs, club drugs (ecstasy), marijuana, or synthetic drugs.
- Engaging in theft of property, goods, or services.

You will not be employable in criminal justice if you have:

- Felony convictions.
- Domestic abuse convictions.
- Placement on an abuse registry (Sex offender, child/elder abuse).
- Drug convictions, or history of drug use or abuse (methamphetamine, cocaine, heroin, etc.) Each agency (city, county, state, or federal) sets their own limits on marijuana use from zero tolerance to a limited amount of use, and factors in

how recent the use was.
- Weapons violations.

Ultimately, criminal justice employers will rationalize your behavior by this criteria: If you know or reasonably believe an action is illegal or will cause harm then the best candidate will take responsibility, demonstrate self-control, and not do it.

Lastly, employers will ask our faculty for references. Students need to know that full time faculty and adjunct faculty members are constantly formally and informally assessing students in terms of academic performance, attendance, honesty, professionalism, social skills, maturity, and appearance so that we can make objective assessments when asked. Your interactions count, and we are here to mentor you.

Early Childhood Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time
Program Start	Fall, Spring, Summer

The early childhood (teacher licensure) transfer major is an introduction to teaching Pre-Kindergarten through grade 3. This transfer major is designed for students to complete the first two years of a four-year teaching degree program, earning their Associate of Arts degree in Liberal Arts. Students then transfer to an accredited teacher's education program at a public or private four-year college or university and begin work immediately with their major classes.

Starting your education major at Hawkeye will allow you to have practical experience with students in local schools beginning on day one. The classes you will take have been designed to allow you to gain practical insight into the teaching profession and offer many opportunities to work with local students.

Hawkeye provides the introductory education courses, delivered in various modalities including small face-to-face settings, hybrid, and online, that are needed to help you explore the field and build a foundation for the career you want to join. Ultimately, it can help you to decide if this is the career for you.

Career Opportunities

The following are some of the career opportunities you can pursue in education:

- Public/Private School Teacher
- School Librarian
- School Counselors
- Administrator
- Curriculum Design
- Substitute Teacher
- Marketing
- Technical writer
- Human resources
- Management
- Entrepreneurship
- Grant Writer
- After-School Programs and Youth Organizations
- Writer/Editor
- Government Agencies

Transfer Information

Articulation agreements provide you the security that your credits will transfer into the major you want to attain. Hawkeye holds articulation agreements with:

- Upper Iowa University
- Northwestern in Orange City
- University of Northern Iowa

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Early Childhood Teacher Licensure Transfer Courses				
EDU-235	Children's Literature		3	
EDU-240	Educational Psychology ►		3	
EDU-246	Including Diverse Learners		3	
EDU-255	Technology in the Classroom		3	
EDU-920	Field Experience ►		1	
MAT-112	Math for Elementary Teachers I ►		3	
POL-111	American National Government -OR-	O E	3	◆
HIS-151	U.S. History to 1877 -OR-	O E	3	◆
HIS-152	U.S. History Since 1877	O E	3	◆
PSY-121	Developmental Psychology		3	
		Total Credits	**22**	

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics A. Biological Sciences B. Physical Sciences	7
II. Humanities	9
III. Social Sciences A. People and Their Relationships	3
IV. Communications	9
V. Social Diversity	3
VII. Elective Courses *	9
	Total Credits 40

* Students planning to transfer to the University of Northern Iowa should see their advisor for additional course options.

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Elementary Education Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time
Program Start	Fall, Spring, Summer

The elementary education transfer major is an introduction to teaching grades Kindergarten through grade 6. This transfer major is designed for students to complete the first two years of a four-year teaching degree program, earning their Associate of Arts degree in Liberal Arts. Students then transfer to an accredited teacher's education program at a public or private four-year college or university and begin work immediately with their major classes.

Starting your education major at Hawkeye will allow you to have practical experience with students in local schools beginning on day one. The classes you will take have been designed to allow you to gain practical insight into the teaching profession and offer many opportunities to work with local students.

Hawkeye provides the introductory education courses, delivered in various modalities including small face-to-face settings, hybrid, and online, that are needed to help you explore the field and build a foundation for the career you want to join. Ultimately, it can help you to decide if this is the career for you.

Career Opportunities

The following are some of the career opportunities you can pursue in education:

- Public/Private School Teacher
- School Librarian
- School Counselors
- Administrator
- Curriculum Design
- Substitute Teacher
- Marketing
- Technical writer
- Human resources
- Management
- Entrepreneurship
- Grant Writer
- After-School Programs and Youth Organizations
- Writer/Editor
- Government Agencies

Transfer Information

Articulation agreements provide you the security that your credits will transfer into the major you want to attain. Hawkeye holds articulation agreements with:

- Upper Iowa University
- Northwestern in Orange City
- University of Northern Iowa

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Elementary Education Transfer Courses				
EDU-210	Foundations of Education		3	
EDU-235	Children's Literature		3	
EDU-240	Educational Psychology ►		3	
EDU-246	Including Diverse Learners		3	
EDU-255	Technology in the Classroom		3	
EDU-920	Field Experience ►		1	
HIS-151	U.S. History to 1877 -OR-	O E	3	◆
HIS-152	U.S. History Since 1877	O E	3	◆
MAT-112	Math for Elementary Teachers I ►		3	
PSY-121	Developmental Psychology		3	
			Total Credits	**25**

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics A. Biological Sciences B. Physical Sciences	7
II. Humanities	9
III. Social Sciences A. People and Their Relationships	3
IV. Communications	9
V. Social Diversity	3
VII. Elective Courses	6
	Total Credits 37

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Exercise Science and Kinesiology Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

A career in Exercise Science and Kinesiology aims to improve lifestyles by focusing on prevention and helping to change individual behavior and thought-processes. Options include working with individuals directly or through school and workplace programs.

Students interested in completing a bachelor's degree in Exercise Science and Kinesiology you should consider the Exercise Science and Kinesiology Liberal Arts Transfer Major.

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Exercise Science and Kinesiology Transfer Courses		
BIO-151	Nutrition	3
BIO-168	Human Anatomy and Physiology I	4
BIO-173	Human Anatomy and Physiology II ►	4
MAT-156	Statistics ►	3
PHY-162	College Physics I ►	4
	Total Credits	**18**

Remaining Liberal Arts Coursework	
II. Humanities	9
III. Social Sciences	9
IV. Communications	9
V. Social Diversity	3
VII. Elective Courses	14
	Total Credits 44

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Fine Arts Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

If you are interested in completing a bachelor's degree in Fine Arts you should consider the Fine Arts Liberal Arts Transfer Major.

Students interested in Fine Arts will investigate the creative possibilities of a variety of media and process in personal expression ranging from drawing, painting, photography, and design, as well as a contextual perspective of world art and its concepts.

Career Opportunities

The following are some of the career opportunities you can pursue in Fine or Performing in non-profit, radio/television, museum/gallery, performing arts, education and business sectors:

- Artist
- Animation Artist
- Arts Administrator
- Art Conservationist
- Arts Education Coordinator at an art museum or art center
- Art Handler
- Art Restorer
- Art Therapist
- Biological or Medical Illustrator
- Curator
- Entrepreneur
- Graphic Designer
- Illustrator
- K-12 Art Teacher

Transfer Information

School of Art Colleges and Universities

- Central College, Art Department
  - central.edu/academics/majors/art
- Coe College, Art and Art History Department
  - www.coe.edu/academics/majors-areas-study/art-art-history
- Cornell College, Department of Art & Art History
  - www.cornellcollege.edu/art/index.shtml
- Dordt College, Art & Design Department
  - www.dordt.edu/academics/undergraduate-programs/4-year-programs/art-design
- Iowa State University, College of Design
  - catalog.iastate.edu/collegeofdesign/#majorstext
- Luther College, Visual and Performing Arts
  - www.luther.edu/visual-performing-arts/

- University of Iowa, School of Art and Art History
    - art.uiowa.edu
- University of Northern Iowa, Department of Art
    - art.uni.edu
- Upper Iowa University
    - uiu.edu/academics/programs/art
- Wartburg College, Art Department
    - www.wartburg.edu/art

Planning Your Class Schedule

Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.

Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.

Not all courses may be required for transfer to your future major.

Courses are subject to change.

◆ General education course.

O Course meets 100% online.

Fine Arts Transfer Courses	
ART-120 2-D Design	3
ART-123 3-D Design	3
ART-133 Drawing	3
ART-134 Drawing II	3
ART-203 Art History I	3
ART-204 Art History II	3
	Total Credits 18

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics	10
II. Humanities	6
III. Social Sciences	9
IV. Communications	9
V. Social Diversity	3
VII. Elective Courses	7
	Total Credits 44

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

History Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	59
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

Students studying History will acquire an essential Liberal Arts background preparing them for careers calling for skills in research, analysis, information management, writing, and speaking.

If you are interested in completing a bachelor's degree in History you should consider the History Liberal Arts Transfer Major.

Career Opportunities

- College educator
- Corporate/organization historian
- Archivist
- Public historian

Find employment in the following sectors:

- Government
- Business
- Museums
- Non-profit organizations
- Education
- Legal profession

Check out the American Historical Association for more information on history careers: www.historians.org

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

History Transfer Courses				
ENG-106	Composition II ►		3	
HIS-117	Western Civilization I: Ancient and Medieval -AND-	O	3	◆
HIS-118	Western Civilization II: Early Modern -OR-	O	3	◆
HIS-119	Western Civilization III: The Modern Period	O E	3	◆
HIS-151	U.S. History to 1877		3	
HIS-152	U.S. History Since 1877		3	
SPC-101	Fundamentals of Oral Communication		3	
			Total Credits 15	

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics	10
II. Humanities B. Humanities	6
III. Social Sciences A. People and Their Relationships C. Topics in Social Sciences	6
IV. Communications A. Written Communications	3
V. Social Diversity	3
VII. Elective Courses	16
	Total Credits 44

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Human and Family Services Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

Are you interested in exploring and understanding human behaviors, social policy, and social programs? The transfer major in Human and Family Services is intended to prepare students for employment with various types of social agencies. This program is for students interested in transferring to a four-year institution with a major related to Human and Family Services. You will take courses in science, communication, math, humanities, social science and required human services subject areas in preparation to transfer into a bachelor's degree program.

According to the U.S. Bureau of Labor Statistics, the job market for social and human service assistants is expected to grow more than the average growth for all professions. Job growth for every job will be about 7% between 2016 – 2026, but the projected growth for human service assistants is 16%. The Bureau of Labor Statistics suggests that over the next few years, more job opportunities in this field may become available in senior care facilities or in nonprofits that deal with addiction recovery. The agency stresses that the most job opportunities will be accessible for people with postsecondary degrees in social work or human services.

Career Opportunities

Examples of occupational titles of human service workers/practitioners:

- Case Worker
- Youth Worker
- Residential Counselor
- Case Manager
- Alcohol Counselor
- Drug Abuse Counselor
- Advocate
- Rehabilitation Case Worker
- Halfway House Counselor
- Parole Officer
- Probation Officer
- Special Needs Care
- Home Health Worker
- Child Advocate
- Child Abuse Worker
- Child Support Specialist
- Mental Health Counselor
- Family Support Worker
- Social Service Liaison
- Behavioral Management Assistant
- Eligibility Counselor
- Adult Day Care Worker
- Life Skills Instructor
- Neighborhood Worker
- Group Activities Aide
- Therapeutic Assistant
- Case Monitor
- Juvenile Court Liaison
- Provider Group Home Worker
- Crisis Intervention Counselor
- Community Organizer
- Community Outreach Worker
- Community Action Worker
- Intake Interviewer

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Human and Family Services Courses		
MAT-156	Statistics ►	3
PSY-111	Introduction to Psychology	3
PSY-121	Developmental Psychology	3
PSY-261	Human Sexuality	3
SOC-110	Introduction to Sociology	3
SOC-120	Marriage and Family	3
SOC-160	Introduction to Social Work	3
SOC-181	Field Experience ►	1
		Total Credits 22

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics A. Biological Sciences B. Physical Sciences	7
II. Humanities	9
III. Social Sciences B. American Society	3
IV. Communications	9
V. Social Diversity	3
VII. Elective Courses	9
	Total Credits 40

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Political Science Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

A degree in Political Science offers students a variety of tracks working within public service or the private sector. Options include international affairs, global finance, government service and policy-making, law, and diplomacy. Graduate study in this field will further enhance career opportunities.

Study in Political Science can be readily interfaced with other disciplinary areas. Many successful business persons and community leaders have earned a degree in political science in addition to other fields as well as their work experience.

Career Opportunities

A degree in Political Science prepares students for successful careers with high employability in a variety of fields, such as those listed below. Graduate study in this field and its various sub-fields (MA/MS, Ph. D., J.D.) will further enhance career opportunities and yield lucrative salaries.

- Law/international law
- Business administration
- Public administration
- Marketing and advertising
- International relations and diplomacy
- Finance/international finance
- Criminal justice
- Military service/officer training
- Non-profit organizations/non-governmental organizations
- Education
- Foreign language and translation services

Find employment in the following sectors:

- Education
- Government
- Non-profit organizations
- Legal profession
- Business

Political Science Programs In Iowa

Hawkeye Community College has articulation agreements with the University of Iowa, Iowa State University, and the University of Northern Iowa.

The Political Science Liberal Arts transfer major allows for a more seamless transition to your four-year program of study.

See Best Political Science & Government Schools in Iowa to help select a transfer college or university: www.collegefactual.com/majors/social-sciences/political-science-and-government/rankings/top-ranked/the-plains-states/iowa.

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Political Science Transfer Courses				
ENG-106	Composition II ►		3	
MAT-156	Statistics ►		3	
POL-111	American National Government		3	
POL-121	International Relations		3	
POL-125	Comparative Government and Politics		3	
SPC-112	Public Speaking -OR-	O E	3	◆
SPC-101	Fundamentals of Oral Communication	O E	3	◆
		Total Credits	**18**	

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics A. Biological Sciences B. Physical Sciences	7
II. Humanities	9
III. Social Sciences A. People and Their Relationships	3
IV. Communications A. Written Communications	3
V. Social Diversity	3
VII. Elective Courses	19
Total Credits	**44**

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Psychology Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

Psychology is both a science and a profession. Regardless of your specific career plans, study in Psychology will develop your critical thinking and interpersonal skills and broaden your understanding of research, ethics, and human behavior. Graduate study in this field will further enhance career opportunities.

Career Opportunities

- Counselor or therapist
- Human resource professional
- School psychologist
- Market researcher
- College educator
- Sports psychologist

Find employment in the following sectors:

- Education
- Non-profit organizations
- Government
- Business
- Health
- Research

The American Psychological Association provides additional information on careers and subfields of Psychology: www.apa.org/careers/resources/guides/careers.aspx.

Furthering Education in Psychology

- Iowa State University
    - psychology.iastate.edu
- University of Iowa
    - psychology.uiowa.edu
- University of Northern Iowa
    - csbs.uni.edu/psych

For additional programs and program information, visit Psychology Schools in Iowa: www.psychologydegree411.com.

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Psychology Transfer Courses				
BIO-105	Introductory Biology -OR-		4	◆
BIO-112	General Biology I -OR-		4	◆
BIO-113	General Biology II -OR-		4	◆
BIO-163	Essentials of Anatomy and Physiology -OR-	E	4	◆
BIO-166	Fundamentals of Anatomy and Physiology -OR-		4	◆
BIO-168	Human Anatomy and Physiology I	E	4	◆
MAT-156	Statistics ►		3	
PHI-105	Introduction to Ethics -OR-	O E	3	◆
PHI-101	Introduction to Philosophy	O E	3	◆
PSY-111	Introduction to Psychology		3	
PSY-121	Developmental Psychology		3	
PSY-251	Social Psychology ►		3	
			Total Credits 19	

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics — B. Physical Sciences	3
II. Humanities — A. Western Civilization	3
II. Humanities — B. Humanities 1. Literature and Fine Arts -OR-	3
II. Humanities — B. Humanities 3. Non-Western Cultures	3
III. Social Sciences — B. American Society	3
IV. Communications	9
V. Social Diversity	3
VI. Elective Courses — A. Required Elective Course	1
VI. Elective Courses — B. Suggested Elective Courses	18
	Total Credits 43

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Social Work Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

Study in Social Work will help you gain skills in critical thinking, research methods, understanding the way society works, and understanding the relationship between individuals and the societies in which we live. Social Work emphasizes the importance of social environment as it affects the quality of people's lives. The skills you learn studying Social Work are transferable to many careers.

23 Defining Moments of Social Work: thebestschools.org/magazine/23-defining-moments-of-social-work

Career Opportunities

A Social Work degree prepares students for career opportunities in the public, private, and non-profit sectors. The following are some of the major career fields you can pursue related to Social Work:

- School social work
- Older adults
- Mental health
- Healthcare
- People with disabilities
- Criminal justice/corrections
- Children, youth, and families
- Substance use, abuse, and dependence

The National Association of Social Workers (www.socialworkers.org/About/Ethics/Code-of-Ethics/Code-of-Ethics-English) and The Best Social Work Jobs (thebestschools.org/careers/best-social-work-jobs) also provide additional information on careers in Social Work.

School of Social Work Colleges and Universities

- Briar Cliff University, Sioux City, IA
  - www.briarcliff.edu
- Buena Vista University, Storm Lake, IA
  - www.bvu.edu
- Clarke University, Dubuque, IA
  - www.clarke.edu
- Dordt College, Sioux Center, IA
  - www.dordt.edu
- Loras College, Dubuque, IA
  - www.loras.edu
- Luther College, Decorah, IA
  - www.luther.edu
- University of Iowa, Iowa City, IA
  - uiowa.edu
- University of Northern Iowa, Cedar Falls, IA
  - uni.edu
- Wartburg University, Waverly, IA
  - www.wartburg.edu
- The Best Online Masters Social Work Degree Programs
  - thebestschools.org/rankings/best-online-master-social-work-degree-programs

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Social Work Transfer Courses		
BIO-154	Human Biology	3
MAT-156	Statistics ►	3
POL-111	American National Government	3
PSY-111	Introduction to Psychology	3
SOC-110	Introduction to Sociology	3
SOC-120	Marriage and Family	3
SOC-160	Introduction to Social Work	3
SOC-180	Social Work Interactional Skills ►	3
SOC-181	Field Experience ►	1
		Total Credits 25

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics B. Physical Sciences	4
II. Humanities	9
IV. Communications	9
V. Social Diversity	3
VII. Elective Courses	12
	Total Credits 37

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Sociology Liberal Arts Transfer Major

Award	Associate of Arts (AA)
Credits	62
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer

Are you curious about the world around you — why people, groups, and society in general operate as they do? Do you want to better understand the relationship between individuals and society? Can you see yourself working for social change in ways that positively impacts people's lives? If you've answered yes to these questions, a Sociology degree might be perfect for you!

Sociology is the study of social life, including social influences on human behavior. It is a "21st century career," which provides students an opportunity to build transferable skills such as thinking critically, making evidence-based arguments, employing various research methods, interpreting data, writing effectively, and understanding diverse perspectives (American Sociological Association, 2013).

What can you do with a sociology degree?

Most people who get a degree in sociology don't become sociologists. The skills you will gain from a sociology degree qualify you for employment in a variety of fields including:

- Government agencies with careers in public health, human resources, urban planning, social services, corrections, etc.
- Non-profit organizations with careers in victim advocacy, youth and leisure services, etc.
- Private sector with careers in marketing, sales, public relations, etc.

Getting a transfer Associate of Arts degree in Sociology at Hawkeye can prepare you for a Bachelor's in Sociology, but students might also choose another major when they transfer. For example, some students end up going into Family, Youth, and Leisure Services, Social Work, Secondary Education, or Gender Studies.

Some people major in sociology in their undergraduate work in preparation for law school or master's degree programs in fields such as Public Policy, Non-Profit Management, or Business Administration.

If you're interested in becoming a sociologist — either to do research, college teaching, or both — you will need to earn at least a Master's degree.

Earning a Bachelor of Arts / Bachelor of Science (and Beyond) in Sociology

Check out the following nearly transfer institutions to continue your education:

- University of Northern Iowa, Sociology Major
    - csbs.uni.edu/sac/majors/sociology-major
- Iowa State, Department of Sociology and Criminal Justice, Sociology program
    - soc-cj.iastate.edu/majors/sociology-program
- University of Iowa, College of Liberal Arts and Sciences, Sociology and Criminology
    - clas.uiowa.edu/sociology/undergraduate-program
- Upper Iowa University, Sociology program
    - uiu.edu/academics/programs/sociology
- Wartburg College, Sociology + Criminal Justice Major
    - www.wartburg.edu/sociology-criminology

Planning Your Class Schedule

- Students should consult with their Academic/College Success Advisor to select courses, make a transfer plan, and periodically review their progress towards their degree completion.
- Students are also encouraged to contact the admissions office at the college to which they plan to transfer during their first year at Hawkeye in order to obtain specific program and transfer requirements.
- Not all courses may be required for transfer to your future major.
- Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Sociology Transfer Courses		
MAT-156	Statistics ►	3
POL-111	American National Government	3
PSY-251	Social Psychology ►	3
SOC-110	Introduction to Sociology	3
SOC-115	Social Problems	3
SOC-120	Marriage and Family	3
	Total Credits 18	

Remaining Liberal Arts Coursework	
I. Natural Science and Mathematics — A. Biological Sciences and B. Physical Sciences	7
II. Humanities	9
IV. Communications	9
V. Social Diversity	3
VI. Elective Courses — A. Required Elective Course	1
VI. Elective Courses — B. Suggested Elective Courses	15
Total Credits 44	

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Career Area

AGRICULTURE

Ag Business Management

Animal Science

Landscape and Turf Management

Natural Resources Management

Veterinary Assisting

Ag Business Management

The Ag Business Management program allows you to learn about all aspects of agriculture, including:

- Agronomy/crop production
- Precision agriculture
- Farm management
- Business
- Animal production

Learn from instructors who bring real-world experience from their education, everyday farming, and professional lives.

Hands-On Learning Opportunities

- **Hawkeye's 225-acre Farm Lab:** Learn farm management, animal production, and crop production skills.
- **Precision Technology:** Use the latest farm equipment and technology, including global positioning systems (GPS), geographic information systems (GIS), and unmanned aerial vehicles in crop production and land management.
- **Field Trips:** Visit various size farming operations and seed plant production facilities to learn how your skills and knowledge can be applied in a variety of work environments.
- **Conferences and Workshops:** Expand your knowledge and leadership skills at the Postsecondary Agricultural Student (PAS) Conference, World Food Prize Borlaug Dialogue Symposium, Agribusiness Association of Iowa Showcase, and the Iowa State University Crops Clinics.
- **Employment Experience:** Gain 320 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Transfer Information

Articulation agreements allow you to transfer your Ag Business Management coursework to Northwest Missouri State University and to the Agricultural Studies, Agricultural Business, and Agronomy programs at Iowa State University. Hawkeye also has transfer relationships with South Dakota State University, University of Wisconsin–Platteville, Upper Iowa University, and Morningside College.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

The changing face of agriculture has resulted in new and challenging career opportunities. Graduates work in fields and offices with individual farmers and large farming operations on all aspects of agriculture, including:

- Agriculture technology
- Agriculture production
- Agriculture sales and marketing
- Agriculture finance

Graduates may find working as:

- Agronomy specialists
- Crop scouts

- Equipment/parts assistants
- Grain merchandisers
- Farm and business managers
- GPS/GIS technologists
- Research assistants

Example Careers and Average Wages

	Entry	Average	Experienced
Agricultural Equipment Operators	$30,500	$40,200	$45,000
First-Line Supervisors of Farming, Fishing, and Forestry Workers	$38,700	$58,300	$68,100
Agricultural and Food Science Technicians	$32,800	$44,800	$50,800

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Ag Leader Technology	Ames, IA
AgVantage FS	Waverly, IA
Dupont Pioneer Hi-Bred	Johnston and Reinbeck, IA
Mid-Iowa Cooperative	Beaman, IA
United Agri Products, Inc.	Winthrop, IA
Youngblut Ag	Dysart, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Ag Business Management AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	69
Program Start	Fall, Spring, Summer
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1				
AGA-114	Principles of Agronomy		3	
AGC-103	Ag Computers -OR-	O E	3	◆
CSC-110	Introduction to Computers ► -OR-	O E	3	◆
CSC-116	Information Computing ►		3	◆
AGS-113	Survey of the Animal Industry		3	
ENG-105	Composition I ► -OR-		3	▣
COM-781	Written Communication in the Workplace ►		3	▣
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
	Course from Electives List 1		3	
		Total Credits	**18**	

Term 2

AGA-376	Integrated Pest Management	8WK2		3	
AGA-154	Fundamentals of Soil Science			3	
AGS-319	Animal Nutrition -OR-			3	
AGS-216	Equine Science -OR-	8WK2		3	
AGS-218	Domestic Animal Physiology ► -OR-			4	
AGS-225	Swine Science -OR-	8WK1		3	
AGS-226	Beef Cattle Science -OR-	8WK1		3	
AGS-272	Foods of Animal Origin ► -OR-	8WK1		5	
AGS-305	Livestock Evaluation			3	
SOC-115	Social Problems -OR-		O E	3	◆
PSY-111	Introduction to Psychology -OR-		O E	3	◆
PSY-102	Human and Work Relations -OR-			3	◆
SOC-110	Introduction to Sociology		O E	3	◆
SPC-101	Fundamentals of Oral Communication			3	
	Course from Electives List 2			3	
			Total Credits	**18**	

Term 3

ACC-131	Principles of Accounting I ► -OR-			4	
ACC-115	Introduction to Accounting			4	
AGB-235	Introduction to Agriculture Markets -OR-		O E	3	◆
MKT-110	Principles of Marketing		O E	3	◆
	Course from Electives List 1			3	
	Course from Electives List 2			3	
	Course from Electives List 2			3	
	Course from Electives List 3			3	
			Total Credits	**19**	

Term 4

AGB-330	Farm Business Management -OR-	8WK1		3	
FIN-121	Personal Finance			3	
AGT-805	Employment Experience	8WK2		5	
	Course from Electives List 3			3	
	Course from Electives List 3			3	
			Total Credits	**14**	

Electives List 1

AGA-214	Cash Grains		3
BIO-105	Introductory Biology		4
BIO-112	General Biology I		4
BIO-113	General Biology II		4
CHM-122	Introduction to General Chemistry ►		4
CHM-165	General Chemistry I ►		4
CNS-121	Environmental Conservation		3
ENV-115	Environmental Science		3

Electives List 2

AGB-303	Agriculture Leadership		3
AGP-333	Precision Farming Systems		3
AGP-340	Foundations of GIS and GPS		3
AGP-436	Advanced Precision Farming: Hardware		3
AGP-450	Fundamentals of GIS		3

Electives List 3

AGB-331	Entrepreneurship in Agriculture	8WK1	3
AGB-336	Agricultural Selling	8WK1	3
AGB-101	Agricultural Economics		3
AGC-999	Study Abroad		3
AGT-928	Independent Study		1
BUS-102	Introduction to Business		3
ECN-110	Introduction to Economics		3
ECN-120	Principles of Macroeconomics ►		3
ECN-130	Principles of Microeconomics ►		3
MGT-101	Principles of Management		3
MKT-140	Principles of Selling		3

Math Electives	
MAT-102 Intermediate Algebra	4
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

General Agriculture Diploma Courses

Award	Diploma
Credits	36
Program Start	Fall, Spring, Summer
Time to Complete	1 year

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1				
AGA-114	Principles of Agronomy		3	
AGC-103	Ag Computers -OR-	O E	3	◆
CSC-110	Introduction to Computers ► -OR-	O E	3	◆
CSC-116	Information Computing ►		3	◆
AGS-113	Survey of the Animal Industry		3	
ENG-105	Composition I ► -OR-		3	▣
COM-781	Written Communication in the Workplace ►		3	▣
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
	General Agriculture Elective		3	
		Total Credits	**18**	

Term 2

AGA-376	Integrated Pest Management	8WK2		3	
AGA-154	Fundamentals of Soil Science			3	
AGP-450	Fundamentals of GIS -OR-			3	
AGP-333	Precision Farming Systems -OR-			3	
AGP-340	Foundations of GIS and GPS -OR-			3	
AGP-436	Advanced Precision Farming: Hardware -OR-			3	
AGB-303	Agriculture Leadership			3	
AGS-319	Animal Nutrition -OR-			3	
AGS-216	Equine Science -OR-	8WK2		3	
AGS-218	Domestic Animal Physiology ► -OR-			4	
AGS-225	Swine Science -OR-	8WK1		3	
AGS-226	Beef Cattle Science -OR-	8WK1		3	
AGS-272	Foods of Animal Origin ► -OR-	8WK1		5	
AGS-305	Livestock Evaluation			3	
PSY-102	Human and Work Relations -OR-		O E	3	◆
PSY-111	Introduction to Psychology -OR-		O E	3	◆
SOC-110	Introduction to Sociology -OR-		O E	3	◆
SOC-115	Social Problems		O E	3	◆
SPC-101	Fundamentals of Oral Communication			3	
		Total Credits		**18**	

General Agriculture Electives

AGA-214	Cash Grains	3	
BIO-105	Introductory Biology	4	
BIO-112	General Biology I	4	
BIO-113	General Biology II	4	
CHM-122	Introduction to General Chemistry ►	4	
CHM-165	General Chemistry I ►	4	
CNS-121	Environmental Conservation	3	
ENV-115	Environmental Science	3	

Math Electives	
MAT-102 Intermediate Algebra	4
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

Precision Agriculture Certificate Courses

Award	Certificate
Credits	15
Program Start	Fall, Spring, Summer
Time to Complete	4 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

Term 1	
AGA-114 Principles of Agronomy	3
Total Credits	**3**

Term 2	
AGA-154 Fundamentals of Soil Science	3
AGP-450 Fundamentals of GIS	3
Total Credits	**6**

Term 3	
AGP-333 Precision Farming Systems	3
AGP-436 Advanced Precision Farming: Hardware	3
Total Credits	**6**

Animal Science

The Animal Science program provides you the opportunity to develop skills and knowledge required to enter a career in animal science or transfer to a four-year college to continue your education.

You will learn the complete life cycle of beef and swine from pasture to plate, and gain hands-on skills and knowledge in:

- Anatomy and physiology
- Animal behavior
- Record keeping
- Proper animal care
- Feeding and nutrition
- Reproduction and reproductive technology
- Production and farm management
- Meat science/butchering

Learn from instructors who bring real-world experience from their education, everyday farming, and professional lives. Instructor certifications include:

- Beef Quality Assurance (BQA)
- Pork Quality Assurance® Plus (PQA Plus)
- Hazard Analysis and Critical Control Points (HACCP)
- ServSafe

Hands-On Learning Opportunities

- **Hawkeye's 225-acre Farm Lab:** Work with beef and swine to learn their complete life cycle and as well as production and farm management.
- **Meat Lab:** Learn how to cut, process, and grade meat; use meat processing equipment including saw, grinder, stuffer, deli slicers, tumbler, and small smokehouse; and USDA sanitation rules and practices.
- **Certification:** Students will be certified in BQA, PQA Plus ®, Fear Free ®
- **Fistulated Steer:** Learn about the digestive system, and track, test, and analyze the digestibility and nutrition of food.
- **Field Trips:** Visit meat processing plants and various size farming operations to learn how your skills and knowledge can be applied in a variety of work environments.
- **Conferences:** Expand your knowledge and leadership skills at the Postsecondary Agricultural Student (PAS) Conference and the Iowa Pork Congress.
- **Employment Experience:** Gain 320 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Capstone Experience

The Capstone Experience integrates coursework, knowledge, and experiential learning to enable students to demonstrate a broad knowledge of their studies. Hawkeye's Capstone Experience is taught by an Iowa licensed veterinarian.

Transfer Information

An articulation agreement allows you to transfer your Animal Science coursework to the Animal Science/Pre-Veterinary Medicine program at Iowa State University. Hawkeye also has transfer relationships with Northwest Missouri State University, South Dakota State University, and University of Wisconsin—Platteville.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates find employment working in:

- Livestock production
- Livestock sales and marketing
- Livestock processing
- Animal genetics
- Small and large farm operations

Example Careers and Average Wages

	Entry	Average	Experienced
Agricultural and Food Science Technicians	$32,800	$44,800	$50,800
Agricultural Inspectors	$38,800	$52,400	$59,200
Animal Breeders	$24,600	$38,500	$45,400
Farmers, Ranchers, and Other Agricultural Managers	$62,900	$95,600	$111,900
Farmworkers	$22,600	$32,700	$37,800

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
ADM Alliance Nutrition	Quincy, IL
Heartland Co-op	West Des Moines, IA
JBS USA	Marshalltown, IA
Tyson Foods, Inc.	Waterloo, IA
USDA Food Safety Inspection Service	
Westwood Embryo Services	Waverly, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Animal Science AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	69
Program Start	Fall, Spring, Summer
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1				
AGA-114	Principles of Agronomy -OR-		3	
	Natural Science Elective		3	
AGC-103	Ag Computers		3	
AGS-113	Survey of the Animal Industry		3	
PSY-111	Introduction to Psychology -OR-		3	◆
PSY-102	Human and Work Relations -OR-		3	◆
SOC-110	Introduction to Sociology -OR-	O E	3	◆
SOC-115	Social Problems	O E	3	◆
SPC-101	Fundamentals of Oral Communication		3	
	Animal Science Elective		3	
			Total Credits 18	

Term 2				
AGS-225	Swine Science -OR-	8WK1	3	
AGS-216	Equine Science -OR-	8WK1	3	
AGS-226	Beef Cattle Science	8WK2	3	
AGA-154	Fundamentals of Soil Science -OR-		3	
	Natural Science Elective		3	
AGS-319	Animal Nutrition		3	
ENG-105	Composition I ► -OR-		3	▣
COM-781	Written Communication in the Workplace ►		3	▣
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
		Total Credits	**15**	

Term 3			
ACC-131	Principles of Accounting I ► -OR-	4	▣
ACC-115	Introduction to Accounting	4	▣
AGS-211	Issues Facing Animal Science	2	
AGS-218	Domestic Animal Physiology ►	4	
	Animal Science Elective	3	
	Animal Science Elective	3	
	Natural Science Elective	4	
	Total Credits	**20**	

Term 4				
AGS-225	Swine Science -OR-	8WK1	3	
AGS-216	Equine Science -OR-	8WK1	3	
AGS-226	Beef Cattle Science	8WK2	3	
AGS-272	Foods of Animal Origin ► -OR-	8WK1	5	
	Animal Science Elective		3	
AGT-805	Employment Experience	8WK2	5	
	Animal Science Elective		3	
		Total Credits	**16**	

Animal Science Electives			
AGB-330	Farm Business Management	8WK1	3
AGB-336	Agricultural Selling	8WK1	3
AGS-225	Swine Science	8WK1	3
AGS-226	Beef Cattle Science	8WK1	3
AGV-121	Veterinary Medical Terminology *Term 1 and Term 3 elective*	8WK1	2
AGA-376	Integrated Pest Management	8WK2	3
AGS-216	Equine Science	8WK2	3
AGV-123	Companion Animal	8WK2	3
AGA-214	Cash Grains		3
AGA-284	Pesticide Application Certification		3
AGB-101	Agricultural Economics		3
AGB-235	Introduction to Agriculture Markets *Term 3 elective*		3
AGB-303	Agriculture Leadership		3
AGC-999	Study Abroad *Term 4 elective*		3
AGP-333	Precision Farming Systems		3
AGP-450	Fundamentals of GIS		3
AGS-275	Food Safety and Analysis		3
AGS-305	Livestock Evaluation		3
AGV-101	Veterinary Assisting ►		3
AGV-140	Veterinary Pharmacology ►		3
AGV-154	Veterinary Reception and Administration Skills		4

Natural Science Electives		
BIO-105	Introductory Biology	4
BIO-112	General Biology I	4
BIO-113	General Biology II	4
BIO-151	Nutrition	3
BIO-163	Essentials of Anatomy and Physiology	4
BIO-168	Human Anatomy and Physiology I	4
BIO-186	Microbiology	4
CHM-122	Introduction to General Chemistry ►	4
CHM-132	Introduction to Organic and Biochemistry ►	4
CHM-165	General Chemistry I ►	4
CHM-175	General Chemistry II ►	4
CNS-121	Environmental Conservation	3
ENV-115	Environmental Science	3
PHS-120	Exploring Physical Science ►	4
PHS-152	Astronomy ►	4
PHY-162	College Physics I ►	4
PHY-172	College Physics II ►	4

Math Electives		
MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Meat Science Certificate Courses

Award	Certificate
Credits	24
Program Start	Fall, Spring, Summer
Time to Complete	9 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

- ◆ General education course.
- ► Course has a prerequisite and/or corequisite.
- **E** Course meets face-to-face after 5:00pm.

Term 1		
AGS-218	Domestic Animal Physiology ►	4
AGS-305	Livestock Evaluation	3
BIO-186	Microbiology	4
	Total Credits	**11**

Term 2		
AGS-225	Swine Science -OR-	3
AGS-226	Beef Cattle Science	3
AGS-272	Foods of Animal Origin ►	5
AGT-805	Employment Experience	5
	Total Credits	**13**

Landscape and Turf Management

The Landscape and Turf Management program prepares you for a variety of landscape, grounds maintenance, and turf management professional careers. You will learn the science, technical, and managerial knowledge and skills necessary to be successful, including:

- Turfgrass growth and development
- Athletic field maintenance
- Construction safety
- Pesticide application and safety
- Landscape estimating and construction
- Irrigation systems
- Soil fertility and testing

Many students earn additional certifications as part of their coursework:

- Iowa Department of Agriculture and Land Stewardship Commercial Pesticide Applicators License
- OSHA certification in construction safety
- Certified irrigation designer
- Certified concreate paver installer.

Educational diversity creates an added advantage for students. As a member of the National Association of Landscape Professionals (NALP), the program offers you an opportunity to compete in national collegiate landscape competitions.

Hands-On Learning Experiences

- Utilize industry leading technology including precision turf management equipment, business management software, and GPS systems.

- Work with professional quality supplies donated by industry partners such as landscape lighting and LED grow lights.

- Field Trips: Opportunities to visit local golf courses and other businesses to experience their operation and gain first-hand knowledge of day-to-day business.

- Community outreach opportunities to serve the community in various ways such as growing vegetables for the Northeast Iowa Food Bank and other projects that benefit the communities and school districts we serve.

- Opportunities to volunteer at various PGA tournaments on the grounds crew.

- Conferences and Workshops: Expand your knowledge and leadership skills at many regional and national conference groups, including the National Association of Landscape Professionals and the Iowa Turfgrass Institute that is composed of the Iowa Golf Course Superintendents Association, Iowa Sports Turf Managers Association, and Iowa Professional Lawn Care Association. You will also have the opportunity to participate in workshops and professional development activities through our membership and affiliation with Golf Course Superintendents Association of America (GCSAA) and Sports Turf Managers Association (STMA).

- Employment Experience: Gain 320 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Accreditation

The program is accredited by the National Association of Landscape Professionals.

The association also provides an opportunity for exchanging ideas and educational materials in addition to providing opportunities for faculty professional development and networking.

Transfer Information

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Careers in landscape and turf management include:

- Golf course superintendent
- Sports turf manager
- Property manager
- Landscape foreman
- Grounds maintenance
- Lawn care technician
- Equipment and turf product sales positions
- Irrigation auditors/designers

The program is nationally known for the quality of managers and superintendents. Local, as well as employers from all over the country, regularly hire interns and graduates to fill open positions.

Example Careers and Average Wages

	Entry	Average	Experienced
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	$33,500	$48,100	$55,300
Golf Course Superintendents and Turf Managers		$93,200*	$109,600*
Grounds Maintenance Workers	$34,600	$50,700	$58,800
Landscaping and Groundskeeping Workers	$23,000	$32,300	$36,900
Pesticide Handlers, Vegetation Sprayers and Applicators	$33,800	$39,200	$41,900

Source: 2021 Iowa Wage Report, Iowa Workforce Development

* *Source: 2019 Benefits and Compensation Report, Golf Course Superintendents Association of America*

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Bear Creek Landscapes	Cedar Falls, IA
Beaver Hills Country Club	Cedar Falls, IA
City of Cedar Falls	Cedar Falls, IA
Elmcrest Country Club	Cedar Rapids, IA
Iowa Cubs	Des Moines, IA
Matthias Landscaping Co.	Cedar Falls, IA
Minnesota Vikings	Minneapolis, MN
Sunnyside Country Club	Waterloo, IA
Wapsie Pines Lawn Care & Landscaping	Dunkerton, IA
Waterloo Leisure Services	Waterloo, IA

State of the Industry

There is currently a large labor gap in the landscape and turf management industry, particularly in the well-paying management and foreman roles.

Golf courses and athletic facilities of all levels, including the professional level, are finding it difficult to find employees with the technical education to fill leadership positions such as superintendents, assistant superintendents, and sports field managers.

Industry data shows that many currently working in the industry are nearing retirement. This will likely continue to increase the demand for technically skilled workers to take their place.

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Landscape and Turf Management Diploma Courses

Award	Diploma
Credits	42
Enrollment	Full-time, Part-time
Program Start	Fall
Time to Complete	1 year
Course Format	Face-to-Face

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1 — Fall

AGH-108	Horticulture Safety		1	
AGH-112	Introduction to Turfgrass Management		3	
AGH-140	Equipment Operations		2	
AGH-142	Landscape Construction		3	
AGH-161	Irrigation Systems		3	
AGH-400	Athletic Field Maintenance -OR-		3	
AGH-221	Principles of Horticulture		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**18**	

Term 2 — Spring

AGH-211	Advanced Turfgrass Management	8WK1	3
AGH-248	Identifying Plant and Landscape Problems	8WK1	3
AGH-200	Landscape Estimating and Bidding	8WK2	2
AGH-425	Grounds Maintenance	8WK2	3
AGH-431	Maintaining Turf and Landscape Equipment	8WK2	3
AGA-284	Pesticide Application Certification		3
AGH-107	Horticulture Lab		1
		Total Credits	**18**

Term 3 — Summer

AGH-912	Current Topics in Hort.		1
AGT-805	Employment Experience		5
		Total Credits	**6**

Natural Resources Management

The Natural Resources Management program prepares you with the necessary skills and certifications to work in the natural resources field. You will learn about the theories and physical aspects of conservation practices.

Hands-On Learning Opportunities

- **Campus and Community Projects:** You will help manage two on-campus ponds and prairies as well as work with community members and conservation agencies on natural resources projects.
- **Equipment:** Train on a variety equipment, including boats, UTV's, canoes, kayaks, fire equipment, forestry equipment, and electrofishing equipment. You will spend a good portion of your time getting hands-on experience in the field.
- **Field Trips and Activities:** You will experience a variety of natural resources activities throughout the year, both on and off campus. A trademark of the program is the Advanced Outdoor Recreation Techniques class in which students travel to the Boundary Waters Canoe Wilderness Area or backpacking in wilderness destinations.
- **Internship/Employment Experience:** Gain 320 hours of real-world work experience ensuring you have the skills you need to succeed in a conservation career.

Certifications

You may receive the following certifications: Iowa Commercial Pesticide Applicators, First Aid, CPR, National Certified Interpretative Guide, Wilderness First Aid, Boater Safety, ATV Safety, Hunter/Firearm Safety, Leave No Trace Trainer, Leave No Trace Master Educator, S130/S190 Wildland Firefighter, Fish Iowa!, Electrofishing Safety, Chainsaw Safety, and various additional federal certifications.

Accreditation

The program is accredited by the North American Wildlife Technology Association. Hawkeye is the only college in Iowa to be accredited through the North American Wildlife Technology Association.

This accreditation provides assurance of the context and quality of the education offered. The program is reviewed every five years to maintain accreditation status, ensure curriculum standards are met; and recognize specific knowledge, skill sets, and aptitudes.

Transfer Information

Articulation agreements allow you to transfer your Natural Resources Management coursework to the Conservation Management program at Upper Iowa University, the Forestry program at Iowa State University, and the Environmental Resource Management program at the University of Northern Iowa.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Careers in Natural Resources Management include:

- Wildlife technician
- Fishery technician
- Park technician
- Naturalist
- Conservation law enforcement
- Roadside manager
- Soil conservation technician
- Environmental consultant
- Forestry

To increase your employment opportunities and be competitive in your future career, it is recommended that you continue to a four-year degree program.

Example Careers and Average Wages

	Entry	Average	Experienced
Forest and Conservation Technicians	$27,900	$42,000	$49,000
Foresters	$56,700	$71,900	$79,400

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
County Secondary Roads	Many Iowa locations
Iowa County Conservation Boards	Many Iowa locations
Iowa Department of Natural Resources	Many Iowa locations
North Dakota Parks and Recreation	North Dakota
Pheasant Forever	Iowa and South Dakota
Stantec Environmental Services	Many U.S. locations
U.S. Fish and Wildlife Service	Many U.S. locations
U.S. Forest Service	Many U.S. locations
Wisconsin Department of Natural Resources	Many Wisconsin locations

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Natural Resources Management program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	40 Arithmetic	24 Pre-Algebra	14	240 Arithmetic 241 Quantitative Reasoning, Algebra, and Statistics	2.00
Reading	42	47	14	228	2.00
Writing	42 Sentence Skills	20	13	229	1.00

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Natural Resources Management AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	64
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1			
CNS-107	Outdoor Recreation Techniques	1	
CNS-110	Equipment Operation and Safety	2	
CNS-121	Environmental Conservation	3	
CNS-204	Native Vegetation	3	
ENG-105	Composition I ► -OR-	3	▣
COM-781	Written Communication in the Workplace ►	3	▣
MAT-156	Statistics ► -OR-	3	
	Math Elective	3	
		Total Credits 15	

Term 2				
AGA-154	Fundamentals of Soil Science -OR-		3	◆
BIO-113	General Biology II		4	◆
AGA-284	Pesticide Application Certification -OR-		3	◆
BIO-112	General Biology I		4	◆
AGP-340	Foundations of GIS and GPS		3	
CNS-104	Outdoor Recreation II ►		1	
CNS-108	Wildlife Identification		3	
CNS-143	Fire Management ►		3	
CNS-180	Principles of Interpretation ► -OR-	O E	2	◆
ENG-106	Composition II ►	O E	3	◆
		Total Credits	**18**	

Term 3				
CNS-136	Aquatic Management ►		3	
CNS-138	Woodland Management		3	
CNS-205	Advanced Outdoor Recreation Techniques ►		1	
CNS-228	Natural Areas Management		3	
SOC-110	Introduction to Sociology -OR-		3	◆
PSY-102	Human and Work Relations -OR-		3	◆
PSY-111	Introduction to Psychology	O E	3	◆
SPC-101	Fundamentals of Oral Communication		3	
		Total Credits	**16**	

Term 4			
AGT-805	Employment Experience	5	
CNS-109	Wildlife Ecology ►	3	
CNS-134	Wildlife Management ►	4	
CNS-200	Conservation Biology ►	3	
	Total Credits	**15**	

Math Electives		
MAT-102	Intermediate Algebra	4
MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4
MAT-772	Applied Math	3

Natural Resources Aide Certificate Courses

Award	Certificate
Credits	9
Program Start	Fall
Time to Complete	4 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

▣ Non-transfer general education course.
► Course has a prerequisite and/or corequisite.

Term 1	
CNS-107 Outdoor Recreation Techniques -OR-	1
CNS-104 Outdoor Recreation II ►	1
CNS-110 Equipment Operation and Safety -OR-	2
CNS-143 Fire Management ►	3
CNS-121 Environmental Conservation	3
CNS-204 Native Vegetation -OR-	3
CNS-108 Wildlife Identification	3
	Total Credits 9

Veterinary Assisting

The Veterinary Assisting program, an option of the Animal Science program, provides you the opportunity to develop the skills and knowledge required for an entry-level career as a veterinary assistant.

You will learn to assist veterinarians in the care of cats, dogs, cattle, pigs, and sheep, and gain hands-on skills and knowledge in:

- Front desk operations
- Data entry, inventory, and record keeping
- Basic lab analysis
- Proper restraint of animals during exams and minor procedures
- Medical terminology
- Pharmacology
- Cleaning and sanitation of cages, kennels, exam rooms, and offices

Hands-On Learning Opportunities

- **Hawkeye's 225-acre Farm Lab:** Learn kennel management with cats and dogs, as well as clinic operations.
- **Classroom Laboratory:** Learn specific skills in the use of veterinary laboratory equipment
- **Animal Projects:** Practice proper handling of animals, which include dogs, cats, pocket pets, reptiles, birds, and livestock animals.
- **Dog Simulators:** Learn how to perform CPR and proper restraint of animals.
- **Field Trips:** Visit local veterinary offices to learn how your skills and knowledge can be applied in a variety of work environments.
- **Employment Experience:** Gain 320 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.
- **Certification:** Students will become Fear Free ® certified.

Careers

Graduates can be employed as veterinary assistants or animal caretakers in veterinary clinics, humane societies, or pet stores.

Example Careers and Average Wages

	Entry	Average	Experienced
Veterinary Assistants and Laboratory Animal Caretakers	$24,600	$30,500	$33,400

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Brookside Veterinary Hospital	Cedar Falls, IA
Cedar Bend Humane Society	Waterloo, IA
Cedar Valley Veterinary Center	Cedar Falls, IA
Den Herder Veterinary Hospital	Waterloo, IA
Independence Family Animal Care	Independence, IA
PetSmart	Waterloo, IA
Pet Supplies Plus	Cedar Falls, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Veterinary Assisting Diploma Courses

Award	Diploma
Credits	41
Program Start	Fall, Spring
Time to Complete	1 year

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1		
AGS-211	Issues Facing Animal Science	2
AGS-218	Domestic Animal Physiology ►	4
AGS-319	Animal Nutrition	3
AGV-154	Veterinary Reception and Administration Skills	4
	Agriculture Elective	3
		Total Credits 16

Term 2				
AGV-121	Veterinary Medical Terminology	8WK1	2	
AGV-123	Companion Animal -OR-	8WK2	3	
AGS-216	Equine Science -OR-	8WK2	3	
AGS-225	Swine Science -OR-	8WK1	3	
AGS-226	Beef Cattle Science	8WK1	3	
AGV-140	Veterinary Pharmacology ►		3	
ENG-105	Composition I ► -OR-		3	▣
COM-781	Written Communication in the Workplace ►		3	▣
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
PSY-111	Introduction to Psychology -OR-		3	◆
PSY-102	Human and Work Relations -OR-		3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**17**	

Term 3 — Summer				
AGT-805	Employment Experience		5	
AGV-101	Veterinary Assisting ► *Required summer course.*		3	
		Total Credits	**8**	

Agriculture Electives			
AGB-330	Farm Business Management	8WK1	3
AGB-336	Agricultural Selling	8WK1	3
AGS-225	Swine Science	8WK1	3
AGS-226	Beef Cattle Science	8WK1	3
AGS-272	Foods of Animal Origin ►	8WK1	5
AGA-376	Integrated Pest Management	8WK2	3
AGS-216	Equine Science	8WK2	3
AGA-214	Cash Grains		3
AGB-101	Agricultural Economics		3
AGB-235	Introduction to Agriculture Markets		3
AGB-303	Agriculture Leadership		3
AGB-331	Entrepreneurship in Agriculture		3
AGP-333	Precision Farming Systems		3
AGP-450	Fundamentals of GIS		3
AGS-113	Survey of the Animal Industry		3
AGS-275	Food Safety and Analysis		3
AGS-305	Livestock Evaluation		3

Math Electives		
MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Career Area

ARTS AND HUMANITIES

Digital Mass Media

Graphic Design

Professional Photography

Digital Mass Media

The Digital Mass Media program prepares you for a career in audio, video, or multimedia production. You will learn to effectively design and deliver a clear message using a variety of digital formats.

Develop a broad knowledge of the digital media industry and gain entry-level skills in:

- Video production
- Audio production
- File and data management
- Storyboarding
- Lighting
- Media writing and scripting
- Video exposure
- Sound modulation
- Color correction

You may choose to focus your coursework in video, audio, or multimedia design.

- In video courses, you will advance your video production, design, scripting, and editing skills. You will also develop special effects and motion graphics and learn various styles of production.

- In audio courses, you will learn audio production, sound mixing and mastering, sound quality, editing, and miking for live and studio recordings.

- In multimedia design courses, you will learn various styles of video production including live event, journalistic, and documentary. You will also learn how to use unmanned aerial vehicles for photography and video, motion control techniques, writing for a variety of formats, and social issues coverage.

Hands-On Learning Opportunities

- **Portfolio:** Throughout the program, you will develop audio, video, and multimedia projects to create a digital portfolio. You will have the opportunity to have your portfolio reviewed by industry professionals.

- **Industry Technology and Software:** Use the latest technology in the industry as you develop your projects, including but not limited to still and video cameras and lenses, stabilization devices, camera cranes and dollies, camera rigging, lighting, wireless and studio microphones, green screens, studio switches, and sound mixing boards. Learn industry standard software including Adobe Creative Cloud.

- **Field Trips:** Visit advertising agencies, television and video production studios, audio recording studios, and film festivals to learn how your skills and knowledge can be applied in a variety of work environments.

Transfer Information

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates have found work in many environments, including agencies, small businesses, companies, and media outlets working as:

- Multimedia specialists
- Videographers
- Sound technicians
- Video editors
- Freelance videographers
- Camera operators

Example Careers and Average Wages

	Entry	Average	Experienced
Audio and Video Technicians	$35,200	$49,100	$56,000
Broadcast Technicians	$18,000	$35,500	$44,300
Sound Engineering Technicians	$40,100	$58,500	$67,600

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Around the Corner Productions	Cedar Falls, IA
Go Pro, Inc.	San Mateo, CA
InForm Creations	Cedar Falls, IA
KWWL Television	Waterloo, IA
Mudd Advertising	Cedar Falls, IA
KOVR-TV CBS-13	Sacramento, CA
KPTV FOX-12	Portland, OR

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Digital Mass Media AAA Degree Courses

Award	Associate of Applied Arts (AAA)
Credits	60
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1			
ENG-105	Composition I ► -OR-	3	▣
COM-781	Written Communication in the Workplace ►	3	▣
MMS-105	Audio Production	3	
MMS-111	Video Production I	3	
MMS-128	Digital Print Production	3	
PHT-108	Camera I	3	
		Total Credits 15	

Term 2

MMS-134	Media Writing		3	
MMS-208	Sound for Film and Video ►		3	
MMS-213	Video Production II ► -OR-		3	
MMS-214	Audio Production II ►		3	
MMS-218	Editing and Color Grading ► -OR-		3	
MMS-219	Digital Audio Workstation ►		3	
SPC-101	Fundamentals of Oral Communication		3	
		Total Credits	**15**	

Term 3

MMS-117	Social Media for Business		3	
MMS-124	Survey of Commercial Video ► -OR-		3	
MMS-320	Recording Studio I ►		3	
MMS-302	Solo Video Journalism ► -OR-		3	
MMS-321	Electronic Studio Production ►		3	
MMS-340	Live Sound Production ► -OR-		3	
MMS-905	Digital Mass Media Internship -OR-		3	
MMS-949	Special Topics -OR-		3	
MMS-305	Lighting for Cinematography ►		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
SOC-110	Introduction to Sociology -OR-	O E	3	◆
PSY-111	Introduction to Psychology	O E	3	◆
		Total Credits	**15**	

Term 4

MAT-772	Applied Math -OR-		3	
	Math Elective		3	
MMS-265	Mass Communications Law		3	
MMS-330	Motion Graphics for Video ► -OR-		3	
MMS-425	Mixing and Mastering Audio ► -OR-		3	
MMS-905	Digital Mass Media Internship -OR-		3	
MMS-949	Special Topics		3	
MMS-420	Recording Studio II ► -OR-		3	
MMS-431	Group Film ►		3	
MMS-901	Portfolio Production		3	
		Total Credits	**15**	

Math Electives	
MAT-102 Intermediate Algebra	4
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4

Graphic Design

The Graphic Design program prepares you for a graphic design career in print, web, and interactive media design. You will develop essential critical and creative thinking skills, fundamentals of design skills, and production technical skills.

Learn all aspects of the design process, including:

- Principles and elements of graphic design
- Print publication design and layout
- Website design and layout
- Interactive media design
- Illustration
- Photo manipulation
- Project management

In graphic design courses, you will learn to design and publish ads, brochures, logos, magazine covers, packaging, posters, vehicle wraps, and other types of multi-panel or multi-page print publications.

In web design courses, you will learn to design and develop responsive and interactive websites displayed on mobile, tablet, and desktop devices using the latest web design technologies.

Hands-On Learning Opportunities

- **Mac Lab:** Develop the knowledge and skills needed to use industry standard software, including Adobe Creative Cloud, in your future career.

- **Portfolio:** Throughout the program, you will develop print and web projects to create traditional and digital portfolios. You will have the opportunity to have your portfolio reviewed by industry professionals.

- **Field Trips:** Visit advertising agencies, design studios, and printing companies to learn how your skills and knowledge can be applied in a variety of work environments.

Transfer Information

An articulation agreement allows you to transfer your Graphic Design coursework to the Graphic Technologies and Technology Management programs at the University of Northern Iowa. Hawkeye also has transfer relationships with Iowa State University, the University of Iowa, Mount Mercy University, Upper Iowa University, Simpson College, and Wartburg College.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates have found work in many environments, including agencies, small businesses, and companies. They work as:

- Advertising designers
- Art directors
- Brand identity designers
- Creative directors
- Freelance designers
- Illustrators
- Layout artists
- Logo designers
- Multimedia designers
- Package designers
- Photo editing / Photoshop artists
- Pre-press technicians
- Publication designers
- Web designers

Example Careers and Average Wages

	Entry	Average	Experienced
Desktop Publishers	$33,200	$39,000	$41,900
Graphic Designers	$31,000	$47,100	$55,100
Web Developers and Digital Interface Designers	$38,800	$65,700	$79,100

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Almon, Inc.	Dubuque, IA
AMPERAGE Marketing	Cedar Falls, IA
Jack Henry & Associates, Inc.	Cedar Falls, IA
John Deere	Moline, IL
J.W. Morton & Associates	Cedar Rapids, IA
McCullough Creative	Dubuque, IA
Mudd Advertising	Cedar Falls, IA
North Forty	Hiawatha, IA
Scientific Games Interactive/Williams Interactive SoCaMo	Cedar Falls, IA
Spinutech	Cedar Falls, IA
VGM Forbin & VGM Creative	Waterloo, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Graphic Design program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	40 Arithmetic	24 Pre-Algebra	14	240 Arithmetic 241 Quantitative Reasoning, Algebra, and Statistics	2.00
Reading	58	69	16	239	2.50
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Graphic Design AAA Degree Courses

Award	Associate of Applied Arts (AAA)
Credits	63
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1				
COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
GRA-105	Drawing and Composition -OR-		4	◆
ART-133	Drawing * -AND-		3	◆
ART-134	Drawing II *		3	◆
GRA-133	Desktop Publishing		4	
GRA-196	Design and Layout I ►		4	
			Total Credits 15	

* Minimum grade of D in both ART-133 and ART-134 is acceptable replacement for GRA-105.

Term 2

GRA-124	Electronic Illustration ►		4	
GRA-142	Graphic Imaging ►		4	
GRA-197	Design and Layout II ►		4	
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
		Total Credits	**15**	

Term 3

GRA-205	Design and Layout III ► (Offered Fall Only)		4	
GRA-238	Web Design and Layout		4	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
	Graphic Design Elective		3	
	Graphic Design Elective		3	
		Total Credits	**17**	

Term 4

GRA-206	Advanced Design and Layout ►		4	
GRA-239	CMS Web Design ►		3	
GRA-290	Portfolio Preparation ►		3	
SPC-101	Fundamentals of Oral Communication		3	
	Graphic Design Elective		3	
		Total Credits	**16**	

Graphic Design Electives

ART-101	Art Appreciation	3
ART-120	2-D Design	3
ART-143	Painting	3
ART-144	Painting II ►	3
ART-184	Photography	3
ART-203	Art History I	3
ART-204	Art History II	3
COM-152	ETC: Art and Literary Magazine *Term 4 elective*	2
GRA-160	Interactive Multimedia ►	3
GRA-162	Web Page Graphics ►	3
GRA-221	Principles of Illustration ►	3
GRA-232	Photo Direction	3
GRA-924	Honors Project	1
GRA-928	Independent Study	1
GRA-932	Internship	1
GRA-949	Special Topics	1
MKT-110	Principles of Marketing	3

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Professional Photography

The Professional Photography program prepares you to start a career as a professional photographer. In today's market, it takes more to be a professional photographer than just taking a pretty picture. Taught by experienced industry professionals, you will learn the foundational concepts, techniques, and processes that have been used by photographers from the earliest days of photography through today. You will also learn and explore the art, craft, and business of photography.

Hawkeye's Professional Photography program is recognized as one of the best in the Midwest.

Hands-On Learning Opportunities

- **Photo Studios and Equipment Checkout:** Work in one of Hawkeye's six fully-equipped photography studios using industry standard computer software, lighting, backdrops, props, and more to develop your photography skills. Hawkeye offers the largest selection of lenses and photography equipment in the state for you to check out.
- **Darkroom:** Learn to develop analog photography from 35mm up to 8" x 10" images.
- **Photo Imaging Lab:** Develop photography production and editing skills using industry standard software, including Adobe Photoshop.
- **Computer Lab:** In our high end computer labs you will learn on software that the professionals are using.
- **Portfolio:** You will develop print and digital photography portfolios. You will have the opportunity to have your portfolio reviewed by industry professionals.
- **Field Trips:** Visit commercial and portrait studios and meet with past graduates to learn how your skills and knowledge can be applied in a variety of work environments.
- **Professional Conventions:** Students have the opportunity to attend the Professional Photographers of Iowa Winter Convention. Attend presentations from industry experts and make valuable contacts with professionals. Students can also participate in the photo competition to be judged right along with the professionals.
- **Photography Club:** As a part of this student organization you can learn from a variety of real-world experiences while giving back to the community.

Professional Affiliation

Our program is the only program in Iowa recognized by the Professional Photographers of America and the Professional Photographers of Iowa. Graduates earn three merits towards their Master Photographer designation from the Professional Photographers of America.

Transfer Information

An articulation agreement allows you to transfer your Professional Photography coursework to the Technology Management program at the University of Northern Iowa.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates find jobs in professional photography studios and color labs, corporate photography departments, and advertising agencies. Many graduates also go on to start their own photography business or do freelance work.

Example Careers and Average Wages

	Entry	Average	Experienced
Photographers	$17,600	$32,200	$39,500

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
DC Shoes, Inc.	Huntington Beach, CA
John Deere	Moline, IL
Meredith Corporation	Des Moines, IA
Read Photography	Cedar Rapids, IA
Stalzer Photography	Marshalltown, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Professional Photography AAA Degree Courses

Award	Associate of Applied Arts (AAA)
Credits	66
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1				
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
PHT-102	Photo Design I		3	
PHT-106	Introduction to Image Editing		3	
PHT-108	Camera I		3	
PHT-109	Print I ►		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**18**	

Term 2

COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
PHT-110	Camera II ►		3	
PHT-111	Print II ►		3	
PHT-202	Basic Portraiture ►		3	
PHT-204	Basic Commercial Photography ►		3	
PHT-212	Intermediate Electronic Imaging ►		3	
			Total Credits 18	

Term 3

PHT-215	Portrait Image Editing ► -OR-	3
PHT-216	Commercial Image Editing ►	3
PHT-220	Intermediate Portraiture ► -OR-	3
PHT-227	Intermediate Commercial ►	3
PHT-241	Portrait Business ► -OR-	3
PHT-248	Commercial Business ►	3
SPC-101	Fundamentals of Oral Communication	3
	Term 3 Elective	3
	Term 3 Elective	3
	Total Credits 18	

Term 4

PHT-217	Advanced Portrait Image Editing ► -OR-	3
PHT-218	Advanced Commercial Image Editing ►	3
PHT-240	Portrait Production and Portfolio ► -OR-	3
PHT-247	Commercial Production and Portfolio ►	3
	Term 4 Elective	3
	Term 4 Elective	3
	Total Credits 12	

Electives — Term 3

PHT-210 Visual Communication	3
PHT-215 Portrait Image Editing ►	3
PHT-216 Commercial Image Editing ►	3
PHT-220 Intermediate Portraiture ►	3
PHT-227 Intermediate Commercial ►	3
PHT-241 Portrait Business ►	3
PHT-248 Commercial Business ►	3
PHT-253 Art Direction ►	3
PHT-928 Photography Independent Study	1

Electives — Term 4

PHT-217 Advanced Portrait Image Editing ►	3
PHT-218 Advanced Commercial Image Editing ►	3
PHT-240 Portrait Production and Portfolio ►	3
PHT-242 Audio Visual Presentations ►	3
PHT-244 Wedding Photography ►	4
PHT-245 History of Photography	3
PHT-247 Commercial Production and Portfolio ►	3
PHT-249 Advanced Commercial Lighting ►	3
PHT-251 Fine Art Photography ►	3
PHT-928 Photography Independent Study	1

Math Electives

MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4

Career Area

AUTOMOTIVE AND TRANSPORTATION

Auto Collision Technologies

Automotive Technology

Diesel Technology

Auto Collision Technologies

The Auto Collision Technologies program prepares students with the training and knowledge for an entry-level position in the auto collision industry. During the first year of the program students are provided with hands-on training in collision repair. Those who continue to the second year of the program will also gain skills in vehicle repair and maintenance.

Hands-On Learning Opportunities

- Virtual Paint System: Learn a variety of paint techniques, how to reduce costs and paint waste, and improve your efficiency on this state-of-the-art system.
- Collision Lab and Paint Booths: Use the tools and equipment of the industry to work on a variety of different vehicle makes and models and learn to adapt to the industry's changing technology. Gain real-world experience working on customer vehicles.

Certifications

Students will have the opportunity to gain industry certifications in various areas throughout this program including:

- I-Car Platinum Non-Structural Technician ProLevel 1
- I-Car Platinum Refinish Technician ProLevel 1
- I-CAR Welding Certification
- Air Conditioning, Painter

Transfer Information

Many four-year colleges and universities accept a limited number of transfer and elective credits.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates find work in collision repair centers and auto body shops doing vehicle restoration, collision repair and refinishing, body repair, and automotive customization. Positions include but are not limited to:

- Auto body specialists and technicians
- Auto refinisher
- Auto frame/unibody technicians and specialists
- Painters
- Parts manager
- Auto body product salespersons
- Collision specialist
- Estimator

With additional coursework and experience, graduates have become:

- Body shop managers
- Auto insurance adjusters
- Auto appraisers

Example Careers and Average Wages

	Entry	Average	Experienced
Automotive Body and Related Repairers *	$31,900	$46,200	$53,300
Automotive Glass Installers and Repairers	$29,800	$39,700	$44,700
Insurance Appraisers, Auto Damage	$35,900	$55,000	$64,700

Source: 2021 Iowa Wage Report, Iowa Workforce Development

** Automotive Body and Related Repairers wages are based on an hourly wage. Most shops pay on commission base. When working on commission, technicians may be compensated on a per job basis and earn $75,000 – $120,000 per year.*

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Anderson Collision Center	Cedar Falls, IA
Billion Auto	Clive, IA
Clemons Chevrolet	Marshalltown, IA
Deery Brothers Collision Center	Cedar Falls, IA
Dunlap Motors	Independence, IA
Iowa Auto Rebuilders	Waterloo, IA
Rydell Chevrolet	Waterloo, IA
Tophat Automotive Syndicate	Evansdale, IA
Witham Auto Centers	Waterloo, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Auto Collision Technologies AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	80
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
4WK1	Course meets the first 4 weeks of the term.
4WK2	Course meets the second 4 weeks of the term.
4WK3	Course meets the third 4 weeks of the term.
4WK4	Course meets the last 4 weeks of the term.

Term 1			
CRR-821	Introduction to Refinishing I	4WK1	3
CRR-822	Introduction to Refinishing II ►	4WK2	3
CRR-304	Introduction to Collision Repair	4WK3	4
CRR-361	Collision Lab I ►	4WK4	4
MAT-772	Applied Math -OR-		3
	Math Elective		3
			Total Credits 17

Term 2

CRR-874	Advanced Refinishing	4WK1	4	
CRR-886	Advanced Refinishing II ►	4WK2	4	
CRR-658	Advanced Collision Repair	4WK3	4	
CRR-659	Advanced Collision Production Tech	4WK4	4	
CRR-751	Electronic Estimating		2	
			Total Credits 18	

Term 3 — Summer

CRR-879	Refinishing Production Technician	4WK1	4	
CRR-511	Collision Production Technician	4WK2	4	
			Total Credits 8	

Term 4

AUT-643	Auto Starting, Charging, and Electrical	4WK2	4	
AUT-504	Automotive Brake Systems	4WK3	4	
AUT-537	Automotive Advanced Brake Systems	4WK4	4	
COM-781	Written Communication in the Workplace ► -OR-		3	◆
ENG-105	Composition I ►		3	◆
SPC-101	Fundamentals of Oral Communication -OR-		3	◆
SPC-112	Public Speaking		3	◆
			Total Credits 18	

Term 5

AUT-404	Automotive Suspension and Steering	4WK1	4	
AUT-307	Automotive Manual Transmissions and Transaxles	4WK2	4	
AUT-842	Automotive Computerized Engine Controls	4WK3	4	
AUT-704	Automotive Heating and Air Conditioning	4WK4	4	
PSY-102	Human and Work Relations -OR-		3	◆
PSY-111	Introduction to Psychology -OR-		3	◆
SOC-110	Introduction to Sociology		3	◆
			Total Credits 19	

Math Electives	
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

Collision Repair and Refinishing Diploma Courses

Award	Diploma
Credits	43
Program Start	Fall
Time to Complete	1 year

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
4WK1	Course meets the first 4 weeks of the term.
4WK2	Course meets the second 4 weeks of the term.
4WK3	Course meets the third 4 weeks of the term.
4WK4	Course meets the last 4 weeks of the term.

Term 1			
CRR-821	Introduction to Refinishing I	4WK1	3
CRR-822	Introduction to Refinishing II ►	4WK2	3
CRR-304	Introduction to Collision Repair	4WK3	4
CRR-361	Collision Lab I ►	4WK4	4
MAT-772	Applied Math -OR-		3
	Math Elective		3
			Total Credits 17

Term 2

CRR-874	Advanced Refinishing	4WK1	4
CRR-886	Advanced Refinishing II ►	4WK2	4
CRR-658	Advanced Collision Repair	4WK3	4
CRR-659	Advanced Collision Production Tech	4WK4	4
CRR-751	Electronic Estimating		2
		Total Credits	**18**

Term 3 — Summer

CRR-879	Refinishing Production Technician	4WK1	4
CRR-511	Collision Production Technician	4WK2	4
		Total Credits	**8**

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Automotive Technology

The Automotive Technology program prepares you for an entry-level career in automotive and vehicle repair, maintenance, and troubleshooting. You will gain hands-on skills in:

- Automotive electronics
- Testing and diagnosing
- Engine drivability diagnosis and performance
- Automatic transmissions
- Gas engines
- Suspension
- Alignment
- Brakes

Hands-On Learning Opportunities

- Automotive Lab: Use the latest systems, tools, and diagnostic equipment in the industry to work on a variety of different vehicle makes and models. Learn to adapt to changing technology as vehicle components and systems become increasingly sophisticated. Learn with your hands, not in a seat.

- Advanced Driver Assistance Systems (ADAS) equipment: Train on Hawkeye's state of the art Advanced Driver Assistance Systems (ADAS) equipment to learn about Semi-Autonomous cars and calibrating them correctly.

- 2WD Dynojet Chassis Dyno: Assists students in shop work on driveability, diagnostics, and other related work.

- ASE style curriculum and tailor in the FORD ACE Training program brought upon by Colwell Ford and Witham Ford for brand specific training for students that choose to follow that path.

- The newest of tire changing and balancing equipment along with the industry standard Hunter Alignment machines.

Certifications

Students can gain several certifications such as NC3- Snap On Meter, Diagnostics, Service Information, On-Car NC3 Procut Brake lathe, and EPA 609 Refrigerant recovery and recycling certifications.

Transfer Information

An articulation agreement allows you to transfer your Automotive Technology coursework to the Technology Management program at the University of Northern Iowa.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates find employment at automotive dealerships, independent automotive shops, service stations, car manufacturers, and national automotive service centers. Positions include but are not limited to:

- Automotive service technician
- Electronics installer
- Electronics technician
- Mechanic
- Service writer
- Service manager
- Truck technician

Example Careers and Average Wages

	Entry	Average	Experienced
Automotive Service Technicians and Mechanics	$28,600	$44,800	$52,900
Electronic Equipment Installers and Repairers	$24,100	$34,200	$39,300

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Advanced Automotive	Evansdale
Colwell Ford	Waterloo
C&S Subaru Hyundai	Waterloo
Dan Deery Toyota	Cedar Falls
Davis Farm and Auto	Denver
Jim Lind Service	Waterloo
John Deery Nissan	Cedar Falls
Rydell Chevrolet and Dodge	Waterloo
Schuermans Automotive	Cedar Falls
Tandem Tire	Cedar Falls
Witham Auto Centers	Cedar Falls, La Porte City, Waterloo

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Automotive Technology AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	76
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
4WK1	Course meets the first 4 weeks of the term.
4WK2	Course meets the second 4 weeks of the term.
4WK3	Course meets the third 4 weeks of the term.
4WK4	Course meets the fourth 4 weeks of the term.

Term 1

AUT-106	Introduction to Automotive Technology	4WK1	2	
AUT-109	Introduction to Automotive Technology II	4WK1	2	
AUT-643	Auto Starting, Charging, and Electrical	4WK2	4	
AUT-504	Automotive Brake Systems	4WK3	4	
AUT-537	Automotive Advanced Brake Systems	4WK4	4	
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
		Total Credits	**19**	

Term 2

AUT-404	Automotive Suspension and Steering	4WK1		4	
AUT-307	Automotive Manual Transmissions and Transaxles	4WK2		4	
AUT-842	Automotive Computerized Engine Controls	4WK3		4	
AUT-704	Automotive Heating and Air Conditioning	4WK4		4	
PSY-102	Human and Work Relations -OR-		O E	3	◆
PSY-111	Introduction to Psychology -OR-		O E	3	◆
SOC-110	Introduction to Sociology		O E	3	◆
		Total Credits		**19**	

Term 3

AUT-164	Automotive Engine Repair	4WK1		4	
AUT-631	Automotive Electronics	4WK2		4	
AUT-610	Automotive Electrical I	4WK3		4	
AUT-204	Automotive Automatic Transmissions and Transaxles	4WK4		4	
COM-781	Written Communication in the Workplace ► -OR-		O E	3	◆
ENG-105	Composition I ►		O E	3	◆
		Total Credits		**19**	

Term 4

AUT-886	Comprehensive Application ►	4WK1	4
AUT-834	Automotive Fuel Systems	4WK2	4
AUT-827	Automotive Ignition Systems ►	4WK3	4
AUT-315	Automotive Differentials and 4-Wheel Drive	4WK4	4
SPC-101	Fundamentals of Oral Communication		3
		Total Credits	**19**

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Diesel Technology

The Diesel Technology program prepares you to maintain, troubleshoot, and repair diesel engines a variety of transportation and construction vehicles and equipment and agricultural equipment such as tractors, combines, planters, cultivators/plows, and sprayers. You will learn the knowledge and skills needed to work with:

- Gas engines
- Diesel engines
- Hydraulics
- Diesel fuel systems
- Electronic systems and components
- Power trains
- Computer diagnostics
- Engine emissions

Hands-On Learning Opportunities

- **Latest Equipment:** Work on the latest systems and equipment in the industry as well a variety of different makes and models of equipment.
- **Simulators:** Practice your electrical and hydraulic skills in a variety of scenarios in a controlled environment.
- **Partnership with Freightliner:** Through this partnership, you will gain the same hands-on training and knowledge as a Freightliner technician.

Transfer Information

An articulation agreement allows you to transfer your Diesel Technology coursework to the Technology Management program at the University of Northern Iowa.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates find jobs as mechanics, service technicians, and diesel engine specialists in implement dealerships, factories, construction, independent shops, heavy equipment shops, engine machine shops, truck stops, heavy equipment dealerships, consumer product dealerships, independent farms, independent repair shops, and consumer product dealerships.

This profession is expected to grow by 18%* through 2024 in Iowa.

Example Careers and Average Wages

	Entry	Average	Experienced
Bus and Truck Mechanics and Diesel Engine Specialists	$33,700	$48,000	$55,200
Farm Equipment Mechanics and Service Technicians	$35,200	$46,800	$52,600

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Altorfer, Inc.	Cedar Rapids, IA
Cedar Valley Corp., LLC	Waterloo, IA
Deike Implement Co.	Waverly, IA
Growmark	Waterloo, IA
MHC Kenworth	Waterloo and Cedar Rapids, IA
Mid America Energy	Waterloo, IA
P&K Midwest	Waterloo and Keystone, IA
Ryder	Cedar Falls, IA
Thermo King	Cedar Falls, IA
Thompson Truck and Trailer, Inc.	Cedar Rapids and Waterloo, IA
Titan Machinery	Waverly, IA
Truck Center Companies	Waterloo, IA
Warren Transport, Inc.	Waterloo, IA
Ziegler CAT	Mason City and Postville, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Diesel Technology AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	72
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program . Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
4WK1	Course meets the first 4 weeks of the term.
4WK2	Course meets the second 4 weeks of the term.
4WK3	Course meets the third 4 weeks of the term.
4WK4	Course meets the fourth 4 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1			
AGM-124	Technical Procedures for Power Mechanics Techs	4WK1	3
AGM-111	Gas Engine Rebuild	4WK2	4
DSL-377	Diesel Engine Rebuild	8WK2	7
MAT-772	Applied Math -OR-		3
	Math Elective		3
		Total Credits	**17**

Term 2

AGM-104	Electricity	4WK1	4	
AGM-333	Electronics ►	4WK2	3	
DSL-444	Fuel Systems	4WK3	4	
DSL-360	Advanced Diesel Engines, Emissions, and Fuel Systems ►	4WK4	4	
COM-781	Written Communication in the Workplace ► -OR-		3	◆
ENG-105	Composition I ►		3	◆
		Total Credits	**18**	

Term 3

DSL-831	Preventative Maintenance ►	4WK1	4	
DSL-424	EFI Engine Systems ►	4WK2	4	
AGM-119	Hydraulics I ►	4WK3	4	
AGM-224	Hydraulics II ►	4WK4	4	
PSY-102	Human and Work Relations -OR-		3	◆
PSY-111	Introduction to Psychology -OR-		3	◆
SOC-110	Introduction to Sociology		3	◆
		Total Credits	**19**	

Term 4

AGM-401	Ag Power Transfer Systems ►	4WK1	4	
DSL-404	Diesel Truck Power Transfer Systems ►	4WK2	4	
DSL-411	Equipment Repair I ►	4WK3	4	
AGM-402	Equipment Repair II ►	4WK4	3	
SPC-101	Fundamentals of Oral Communication		3	
		Total Credits	**18**	

Math Electives	
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

Career Area

BUSINESS

Accounting

Administrative Office Management

Hospitality Management

Human Resource Management

Marketing Management

Medical Office Specialist

Accounting

The Accounting program prepares you for an entry-level career in the accounting field. You will gain hands-on experience with:

- Preparing, analyzing, and tracking financial information
- Individual income tax preparation
- Payroll accounting
- Accounts payable and receivable
- Computer accounting systems, including Sage Accounting and QuickBooks
- Microsoft Office with emphasis on Excel and Word

Our instructors continue to track industry trends and modify courses and content to stay current with what is needed in the workforce. Hawkeye's Accounting program is an excellent launching point into an accounting career.

Transfer Information

Many four-year colleges and universities accept a limited number of transfer and elective credits.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates work as office accountants or managers in small businesses and as bank tellers or customer service representatives in financial institutions. They also find positions working in financial or accounting offices in public, private, or government accounting departments working with financial statement preparation, payroll, income taxes, budgeting, and cost accounting.

Example Careers and Average Wages

	Entry	Average	Experienced
Bookkeeping, Accounting, and Auditing Clerks	$26,900	$41,200	$48,400

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Advanced Systems, Inc.	Waterloo, IA
Isle Casino Hotel Waterloo	Waterloo, IA
Lee Enterprises (Waterloo-Cedar Falls Courier)	Waterloo, IA
McGladrey LLP	Waterloo, IA
Paul R. Nielsen Co., PC	Cedar Falls, IA

Business	Location
The Principal Financial Group	Waterloo, IA
Veridian Credit Union	Locations throughout Iowa

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Accounting AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	60
Program Start	Fall, Spring, Summer
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1

ACC-115	Introduction to Accounting -OR-	O E	4	◆
ACC-131	Principles of Accounting I ►	O E	4	◆
BUS-102	Introduction to Business -OR-	O E	3	◆
BUS-180	Business Ethics -OR-	O E	3	◆
BUS-183	Business Law -OR-	O E	3	◆
MGT-101	Principles of Management -OR-	O E	3	◆
MGT-110	Small Business Management		3	▣
BUS-108	Business College Experience		1	
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
SPC-101	Fundamentals of Oral Communication		3	
			Total Credits 14	

Term 2

ACC-116	Introduction to Accounting II ► -OR-	O E	4	◆
ACC-132	Principles of Accounting II ►	O E	4	◆
ACC-160	Payroll Accounting ►		2	
ACC-310	Computer Accounting ►		2	
ACC-803	Accounting Simulations ►		1	
CSC-110	Introduction to Computers ► -OR-		3	▣
BCA-205	Database/Spreadsheets ►		3	▣
ENG-105	Composition I ► -OR-		3	▣
COM-781	Written Communication in the Workplace ►		3	▣
		Total Credits	**15**	

Term 3

ACC-222	Cost Accounting ►		4	
ACC-231	Intermediate Accounting I ►		4	
ACC-265	Income Tax Accounting		4	
ECN-120	Principles of Macroeconomics ► -OR-	O E	3	◆
ECN-130	Principles of Microeconomics ► -OR-	O E	3	◆
ECN-110	Introduction to Economics		3	◆
		Total Credits	**15**	

Term 4

ACC-190	Financial Analysis ►		2	
ACC-232	Intermediate Accounting II ►		4	
ACC-360	Accounting Spreadsheets ►		2	
BUS-102	Introduction to Business -OR-	O E	3	◆
BUS-180	Business Ethics -OR-	O E	3	◆
BUS-183	Business Law -OR-	O E	3	◆
MGT-101	Principles of Management -OR-	O E	3	◆
MGT-110	Small Business Management		3	▣
BUS-295	Workplace Professionalism		2	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**16**	

Math Electives	
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

Accounting Technician Diploma Courses

Award	Diploma
Credits	29
Program Start	Fall, Spring, Summer
Time to Complete	1 year

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1				
ACC-115	Introduction to Accounting -OR-	O E	4	◆
ACC-131	Principles of Accounting I ►	O E	4	◆
BUS-102	Introduction to Business -OR-	O E	3	◆
BUS-180	Business Ethics -OR-	O E	3	◆
BUS-183	Business Law -OR-	O E	3	◆
MGT-101	Principles of Management -OR-	O E	3	◆
MGT-110	Small Business Management		3	▣
BUS-108	Business College Experience		1	
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
SPC-101	Fundamentals of Oral Communication		3	
			Total Credits 14	

Term 2

ACC-116	Introduction to Accounting II ► -OR-	O E	4	◆
ACC-132	Principles of Accounting II ►	O E	4	◆
ACC-160	Payroll Accounting ►		2	
ACC-310	Computer Accounting ►		2	
ACC-803	Accounting Simulations ►		1	
CSC-110	Introduction to Computers ► -OR-		3	▣
BCA-205	Database/Spreadsheets ►		3	▣
ENG-105	Composition I ► -OR-		3	▣
COM-781	Written Communication in the Workplace ►		3	▣
		Total Credits	**15**	

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Administrative Office Management

The Administrative Office Management program prepares you with the knowledge and skills needed to become an administrative professional, including:

- coordinating and managing an office environment
- creating, proofreading, and delivering professional documents
- problem solving and customer service
- managing and organizing files and data
- basic accounting
- ethical business practices

Hands-On Learning Opportunities

- Microsoft Office: Develop your skills and knowledge of Microsoft Office applications and earn your Microsoft Office Specialist certification.
- Business communication, computers software, and technology used by office professionals.
- Portfolio: Be prepared for your job search. Develop your resume, cover letter, and other employment documents and practice the interview process.

Transfer Information

Many courses are also required in other business programs, allowing you to double major or transfer into a different Hawkeye program.

For more information, contact a program advisor.

Careers

Graduates find work as administrative professionals in businesses, companies, legal offices, brokerage firms, schools, insurance companies, and financial institutions.

Example Careers and Average Wages

	Entry	Average	Experienced
Executive Secretaries and Executive Administrative Assistants	$38,400	$52,700	$59,900
Secretaries and Administrative Assistants	$27,600	$39,600	$45,600

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
CBE Group	Waterloo, IA
CUNA Mutual Group	Waverly, IA
Dutton Daniels Hines Kalkhoff Cook & Swanson	Waterloo, IA
Hawkeye Community College	Waterloo, IA
John Deere	Waterloo, IA
Kirkwood Community College	Cedar Rapids, IA
Target Distribution Center	Cedar Falls, IA
The VGM Group	Waterloo, IA
Veridian Credit Union	Waterloo, IA
Waterloo Juvenile Public Defender Office	Waterloo, IA
Waterloo Community School District	Waterloo, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Administrative Office Management AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	62
Program Start	Fall, Spring, Summer
Time to Complete	2 years
Course Format	Face-to-Face

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1				
BCA-132	Electronic Communications		3	
BCA-205	Database/Spreadsheets ► -OR-	O E	3	◆
CSC-110	Introduction to Computers ►	O E	3	◆
BUS-102	Introduction to Business		3	
BUS-108	Business College Experience		1	
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
MGT-181	Customer Service Strategies		2	
		Total Credits	**15**	

Term 2

ACC-115	Introduction to Accounting -OR-	O E	4	◆
ACC-131	Principles of Accounting I ►	O E	4	◆
ADM-164	Administrative Office Applications		3	
BUS-180	Business Ethics		3	
ENG-105	Composition I ►		3	
MGT-101	Principles of Management		3	
		Total Credits	**16**	

Term 3

BUS-183	Business Law		3	
BUS-295	Workplace Professionalism		2	
MGT-170	Human Resource Management		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
SPC-101	Fundamentals of Oral Communication		3	
	Term 3 Elective		3	
		Total Credits	**17**	

Term 4

BCA-213	Intermediate Computer Business Applications ►		3
MGT-121	Project Management Basics		3
MGT-142	Problems and Issues in Supervision and Management		3
SOC-205	Diversity in America		3
	Term 4 Elective		2
		Total Credits	**14**

Electives — Term 3

ACC-160	Payroll Accounting ►	2
ACC-310	Computer Accounting ►	2
ADM-108	Keyboarding Skill Development	1
BUS-903	Business Field Experience ►	3
ECN-120	Principles of Macroeconomics ►	3
ECN-130	Principles of Microeconomics ►	3
ENG-106	Composition II ►	3
MAP-402	Medical Law and Ethics	2

Electives — Term 4

ACC-160	Payroll Accounting ►	2
ACC-310	Computer Accounting ►	2
ADM-108	Keyboarding Skill Development	1
BUS-903	Business Field Experience ►	3
ECN-120	Principles of Macroeconomics ►	3
ECN-130	Principles of Microeconomics ►	3
ENG-106	Composition II ►	3
MAP-402	Medical Law and Ethics	2

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Administrative Assistant Diploma Courses

Award	Diploma
Credits	28
Program Start	Fall, Spring, Summer
Time to Complete	1 year
Course Format	Face-to-Face

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1

ADM-108	Keyboarding Skill Development		1	
BCA-132	Electronic Communications		3	
BCA-205	Database/Spreadsheets ► -OR-	O E	3	◆
CSC-110	Introduction to Computers ►	O E	3	◆
BUS-108	Business College Experience		1	
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
MGT-181	Customer Service Strategies		2	
			Total Credits	**13**

Term 2

ACC-115	Introduction to Accounting -OR-	O E	4	◆
ACC-131	Principles of Accounting I ►	O E	4	◆
ADM-164	Administrative Office Applications		3	
BCA-213	Intermediate Computer Business Applications ►		3	
BUS-295	Workplace Professionalism		2	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**15**	

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Hospitality Management

The Hospitality Management program prepares you for supervisor and manager positions in hotels, resorts, restaurants, institutions, and clubs. You will learn to understand and apply the administrative and practical skills to manage food and lodging operations, including:

- Hospitality principles
- Restaurant and hotel management
- Food and bar operations
- Food safety and prep skills
- Human resources
- Nutrition
- Marketing
- Point-of-sales systems
- Budgeting and finances
- Event planning
- Pool safety and maintenance

Learn from instructors who bring real-world experience from their education and professional lives. Instructors have a variety of certifications from the National Restaurant Association and the State of Iowa.

Hands-On Learning Opportunities

- Learning Labs: Hospitality Management students get hands-on experience and learning opportunities running the Main Campus RedTail Café.
- Field Trips: Visit a variety of hotels, restaurants, event centers, and food service facilities to learn how your skills and knowledge can be applied in a variety of work environments.
- Community Classroom: Hawkeye has partnered with local businesses to give you experience with large-scale restaurant, dining, and catering operations.
- Internship: Gain 320 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Certifications

You may take National Restaurant Association certification exams and earn the ServSafe Manager, Food and Beverage Management, Purchasing and Inventory, and Dining Room Management certifications.

Careers

Graduates may find employment for supervisory and managerial positions in hotels, restaurants, institutions, and clubs.

Example Careers and Average Wages

	Entry	Average	Experienced
Food Service Managers	$35,100	$51,300	$59,400

	Entry	Average	Experienced
General and Operations Managers	$45,800	$98,000	$124,100
Lodging Managers	$35,600	$53,500	$62,500

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Courtyard by Marriott	Waterloo, IA
Hilton Garden Inn	Cedar Falls, IA
Western Homes	Cedar Falls, IA
Lost Island Waterpark	Waterloo, IA
The Isle Casino	Waterloo, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Hospitality Management AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	65
Program Start	Fall, Spring, Summer
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1				
BUS-102	Introduction to Business		3	
HCM-249	A la Carte Cooking Lab		4	
HCM-309	Hospitality Safety and Sanitation		3	
HCM-608	Introduction to Hospitality		3	
MAT-772	Applied Math -OR-	O E	3	◆
MAT-110	Math for Liberal Arts ► -OR-	O E	3	◆
MAT-156	Statistics ►	O E	3	◆
		Total Credits	**16**	

Term 2

HCM-336	Event Planning and Customer Service 1	8WK1		3	
HCM-593	Restaurant Management			4	
HCM-605	Hotel Administration			2	
MGT-170	Human Resource Management			3	
SPC-101	Fundamentals of Oral Communication			3	
			Total Credits	**15**	

Term 3

HCM-240	Menu Planning and Design	8WK1		2	
HCM-341	Catering and Banqueting	8WK2		2	
COM-781	Written Communication in the Workplace ► -OR-		O E	3	◆
ENG-105	Composition I ►		O E	3	◆
MGT-210	Management Decision Making			3	
MKT-110	Principles of Marketing			3	
MKT-142	Consumer Behavior			3	
			Total Credits	**16**	

Term 4

HCM-205	Dinner and Front of the House	8WK1		3	
HCM-251	Purchasing, Receiving, and Inventory ►	8WK1		2	
HCM-905	Hospitality Internship ►	8WK2		3	
ACC-115	Introduction to Accounting -OR-		O E	4	◆
ACC-131	Principles of Accounting I ►		O E	4	◆
BUS-183	Business Law			3	
PSY-102	Human and Work Relations -OR-		O E	3	◆
PSY-111	Introduction to Psychology -OR-		O E	3	◆
SOC-110	Introduction to Sociology		O E	3	◆
			Total Credits	**18**	

Human Resource Management

A career in human resources promises to be rewarding as well as challenging, offering many opportunities for growth. With the ever changing needs of an organization and expectations of the human resources department, this field proves to be motivating and inspirational to see the positive impact made on lives.

The Human Resource Management program prepares you to start in entry-level positions in the human resource field. You will gain knowledge and skills in:

- Basic accounting
- Business and labor laws
- Management
- Interviewing
- Job placement
- Needs assessment
- Strategic planning
- Compensation and benefits
- Training techniques
- Professional document creation
- Labor relations

Hands-On Learning Opportunities

The Human Resource Management program is very hands-on. Students complete projects, homework, and assignments that often mimic the real world preparing them to do the job when they graduate.

Students will complete a Business Field Experience/Internship where they gain 192 hours of real-world work experience while learning practical skills needed to be successful in an HR roll as well as vital skills to add to their resume.

Transfer Information

An articulation agreement allows you to transfer your Human Resource Management coursework to the Human Resources Management program at Upper Iowa University–Waterloo. Earn a Bachelor of Science degree in Human Resources Management with two additional years of study. Courses are offered online or in person.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates are employed in all kinds of industries, from health care and nursing homes to manufacturing and retail.

Some find that they are in entry-level positions in large HR departments, which allows them to grow and move up within the organization.

Others wear many hats when working at small businesses in which they experience a large variety of duties and tasks, also affording them the chance to decide which parts of HR they prefer for their career before moving on to different organizations.

In addition, some graduates gain employment at employment agencies who serve as recruiters/screeners for organizations, also increasing their network of contacts with businesses that may lead to potential employment with those companies in the future.

Graduates start in positions such as HR Assistant, Payroll, HR generalist, Recruiter, HR specialist, and trainers. Many find that they can get promoted quickly into management roles, including HR Manager.

Example Careers and Average Wages

	Entry	Average	Experienced
Human Resources Assistants	$31,500	$41,600	$46,700
Human Resources Specialists	$39,000	$60,400	$71,100

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
AS, Incorporated Staffing Agency	Cedar Falls, IA
BerganKDV	Waterloo, IA
City of Waterloo	Waterloo, IA
Colony Brands	Peosta, IL
Express Employment Professionals	Cedar Falls, IA
Grand Jivante	Ackley, IA
Richelieu Foods, Inc.	Grundy Center, IA
Target Human Resources	Waterloo, IA and TX
Transamerica Corporation	Cedar Rapids, IA
UnityPoint Health—Allen Hospital	Waterloo, IA
MercyOne	Waterloo, IA
Woodsmall Electric	North Liberty, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Human Resource Management AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	65
Enrollment	Full-time, Part-time
Program Start	Fall, Spring, Summer
Time to Complete	2 years
Course Format	Face-to-Face, Online

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

- ◆ General education course.
- ► Course has a prerequisite and/or corequisite.
- **O** Course meets 100% online.
- **E** Course meets face-to-face after 5:00pm.

Term 1		
BUS-102	Introduction to Business	3
ENG-105	Composition I ►	3
MGT-101	Principles of Management	3
PSY-111	Introduction to Psychology	3
SDV-108	The College Experience -OR-	1
BUS-108	Business College Experience	1
	Human Resource Management Elective	3
		Total Credits 16

Term 2

ACC-131	Principles of Accounting I ►	4
CSC-110	Introduction to Computers ►	3
MGT-142	Problems and Issues in Supervision and Management	3
MGT-170	Human Resource Management	3
SPC-101	Fundamentals of Oral Communication	3
	Total Credits	**16**

Term 3 — Summer

BUS-903	Business Field Experience ► *Required summer course*	3
MAT-110	Math for Liberal Arts ► -OR-	3
	Math Elective	3
	Total Credits	**6**

Term 4

BUS-183	Business Law	3
MGT-174	Training and Employee Development	3
MGT-177	Staffing	3
MGT-180	Management and Labor Relations	3
MGT-590	HR Certification Prep -OR-	3
	Human Resource Management Elective	3
	Total Credits	**15**

Term 5

BUS-180	Business Ethics	3
MGT-178	Employment Law	3
MGT-190	Employee Compensation and Benefits Management	3
MGT-590	HR Certification Prep -OR-	3
	Human Resource Management Elective	3
	Total Credits	**12**

Human Resource Management Electives

ACC-132	Principles of Accounting II ►	4
ECN-120	Principles of Macroeconomics ►	3
ECN-130	Principles of Microeconomics ►	3
ENG-106	Composition II ►	3
MGT-110	Small Business Management	3
MGT-121	Project Management Basics	3
MKT-110	Principles of Marketing	3

Math Electives

MAT-102	Intermediate Algebra	4
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Marketing Management

Today's employers are looking for well-rounded individuals that have a variety of skills to meet the demands and expectations of today's global marketplace. Whether you are looking to work in a support position, managerial role, or possibly start your own business, we have the coursework and resources to help you achieve your goals.

Marketing Management program students build a strong foundation of skills and competencies needed to be successful in today's fast-paced business environment including:

- Organizational and planning skills
- Critical thinking and problem-solving skills
- Communication skills in speaking and writing
- Teamwork and leadership skills
- Computer technology such as Microsoft Office Suite, social media platforms, websites, and digital marketing
- Financial knowledge
- Goal-setting
- Ethics

Students are guided with support from faculty which possess both the necessary academic credentials and industry experience within their respective disciplines. Program faculty also work with area business leaders to keep current with the needs of local employers and incorporate these skills and competencies into program coursework. The rigorous class schedule and optional business field experience course allows students to apply the principles they've learned in a real-world setting.

Transfer Information

Many four-year colleges and universities accept a limited number of transfer and elective credits.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Many graduates of the Marketing Management program have gone on to become marketing managers and professional sales and customer service representatives. Some have gone on to own their own businesses and others have found careers as managers, merchandisers and buyers within various industries.

Graduates from the Marketing Management program are responsible for creating and/or executing marketing strategies, hiring, training, and supervising employees. They are also responsible for buying and selling product offerings, and planning promotions and advertising campaigns throughout a variety of sectors within today's economy.

Current data confirms careers in business/marketing/management are listed as some of the fastest growing sectors within today's global economy.

Business/marketing/management careers offer flexibility, mobility, and above average pay to match your ability.

Example Careers and Average Wages

	Entry	Average	Experienced
Advertising Sales Agents	$22,800	$42,900	$53,000

	Entry	Average	Experienced
Customer Service Representatives	$26,300	$39,800	$46,600
First-Line Supervisors of Non-Retail Sales Workers	$52,300	$83,500	$99,200
First-Line Supervisors of Office and Administrative Support Workers	$38,900	$58,400	$68,200
First-Line Supervisors of Retail Sales Workers	$27,100	$40,700	$47,500
Management Occupations	$52,700	$102,100	$126,800
Marketing Managers	$74,200	$121,900	$145,700
Market Research Analysts and Marketing Specialists	$37,400	$64,600	$78,200
Sales and Related Workers	$25,400	$45,500	$55,600
Sales Managers	$69,800	$118,900	$143,400

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Advanced Heat Treat Corp.	Waterloo, IA
CUNA Mutual Group	Waverly, IA
GEICO Insurance	Coralville, IA
Hy-Vee, Inc.	West Des Moines, IA
John Deere	Moline, IL
Kwik Trip, Inc.	La Crosse, WI
McGraw-Hill Education	Dubuque, IA
MercyOne	Waterloo, IA
PDCM Insurance	Waterloo, IA
Target Distribution Center	Cedar Falls, IA
The Men’s Warehouse, Inc.	Waterloo, IA
The VGM Group	Waterloo, IA
Toyota Financial Services	Cedar Rapids, IA

Business	Location
Veridian Credit Union	Waterloo, IA
W.W. Grainger, Inc.	Waterloo, IA
Walmart Stores, Inc.	Bentonville, AR

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Marketing Management AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	64
Program Start	Fall, Spring, Summer
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1				
BUS-102	Introduction to Business		3	
BUS-108	Business College Experience		1	
ENG-105	Composition I ► -OR-		3	▣
COM-781	Written Communication in the Workplace ►		3	▣
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
MKT-110	Principles of Marketing		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
			Total Credits 16	

Term 2

CSC-110	Introduction to Computers ►		3	
ECN-110	Introduction to Economics -OR-	O E	3	◆
ECN-120	Principles of Macroeconomics ► -OR-	O E	3	◆
ECN-130	Principles of Microeconomics ►	O E	3	◆
MKT-140	Principles of Selling		3	
MKT-160	Principles of Retailing		3	
SPC-101	Fundamentals of Oral Communication		3	
	Marketing Elective		3	
		Total Credits	**18**	

Term 3

ACC-115	Introduction to Accounting -OR-	O E	4	◆
ACC-131	Principles of Accounting I ►	O E	4	◆
BUS-295	Workplace Professionalism		2	
MGT-101	Principles of Management		3	
	Marketing Elective		3	
	Marketing Elective		3	
		Total Credits	**15**	

Term 4

BUS-183	Business Law		3
MGT-170	Human Resource Management		3
MKT-152	Advertising and Visual Merchandising		3
	Marketing Elective		3
	Marketing Elective		3
		Total Credits	**15**

Marketing Electives

ACC-116	Introduction to Accounting II ►	4
ACC-132	Principles of Accounting II ►	4
BCA-132	Electronic Communications	3
BCA-213	Intermediate Computer Business Applications ►	3
BUS-180	Business Ethics	3
BUS-220	Introduction to International Business	3
BUS-903	Business Field Experience ►	3
COM-140	Introduction to Mass Media	3
ENG-106	Composition II ►	3
FIN-121	Personal Finance	3
GRA-133	Desktop Publishing	4
MGT-110	Small Business Management	3
MGT-121	Project Management Basics	3
MGT-210	Management Decision Making	3
MKT-142	Consumer Behavior	3
MKT-198	Sports Marketing	3
MMS-117	Social Media for Business	3

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Medical Office Specialist

The Medical Office Specialist program prepares you for an entry-level career in a medical office. You will gain the knowledge and skills necessary to coordinate and facilitate a medical office, including:

- Medical terminology
- Coding medical diagnoses and procedures
- Typing with speed and accuracy
- Managing and organizing medical files and data
- Ethical business practices

Hands-On Learning Opportunities

- **Health Records System:** Learn the functionality of an electronic health records system by inputting patients' health insurance and demographic information as well as scheduling appointments and collecting payments.
- **Scribing:** Students will learn the basics of working alongside a physician. Scribing is one of healthcare's newest patient record-keeping methods.
- **VGM Immersion Experience:** Students will get a 14-hour job shadow experience at VGM Homelink where they will get hands-on experience with medical billing.

Transfer Information

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates find employment in various health-related organizations such as physicians' and dentists' offices, hospitals, insurance companies, and community health facilities. They work as administrative assistants, office managers, medical secretaries, insurance specialists, clinic administrators, health unit coordinators, and patient service representatives.

Example Careers and Average Wages

	Entry	Average	Experienced
Medical Secretaries	$27,500	$35,700	$39,800

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
American HomePatient	Waterloo, IA

Business	Location
Cedar Valley Medical Specialists, P.C.	Waterloo, IA
Peoples Community Health Clinic, Inc.	Waterloo, IA
UnityPoint Health	Waterloo and Cedar Falls, IA
MercyOne	Waterloo and Cedar Falls, IA
VGM & Associates	Waterloo, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Medical Office Specialist Diploma Courses

Award	Diploma
Credits	34
Program Start	Fall
Time to Complete	9 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

- ◆ General education course.
- ▣ Non-transfer general education course.
- ► Course has a prerequisite and/or corequisite.

Term 1		
ADM-108	Keyboarding Skill Development	1
BUS-108	Business College Experience	1
CSC-110	Introduction to Computers ►	3
HIT-250	Coding I ►	3
HSC-116	Beginning Medical Terminology	4
MAT-772	Applied Math -OR-	3
	Math Elective	3
MGT-181	Customer Service Strategies	2
		Total Credits 17

Term 2

BUS-295	Workplace Professionalism	2
HIT-215	Introduction to CPT ►	2
HIT-290	Reimbursement Methods	3
HSC-124	Advanced Medical Terminology ►	4
MAP-123	Administrative Medical Office Procedures ►	3
MAP-402	Medical Law and Ethics	2
MAP-511	Pharmacology for the Medical Office ►	1
		Total Credits 17

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Career Area

CONSTRUCTION TRADES

Heating and Air Conditioning

Sustainable Construction and Design

Heating and Air Conditioning

The Heating and Air Conditioning program prepares you for an entry-level career installing, maintaining, and repairing residential and commercial heating, air conditioning, and refrigeration equipment. You will become proficient in the theory and processes of electric, boiler, solar, and fossil fuel heat systems, as well as air cooling and refrigeration equipment. Also gain knowledge and skills in:

- Electricity and electronic controls
- Electrical and mechanical troubleshooting
- Air quality, moisture, and temperature control
- Sheet metal fabrication and installation

Hands-On Learning Opportunities

- **HVAC Lab:** Train on a variety of air conditioners, furnaces, heat pumps, air exchangers, boilers, and more.
- **Field Experience:** Gain 192 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Certifications

You may take the EPA Section 608 Universal Refrigerant and the 410A High-Pressure Refrigerant national certification exams. You may also complete the following HVAC Excellence Employment Ready certifications: Air Conditioning, Electrical, and Gas Heat.

Apprenticeship Program

Graduates of the program will have completed the first three levels of the four level HVAC apprenticeship training program. Upon successful completion of level four and four years of on-the-job training, graduates will be eligible to take the journeyperson test to receive their journeyperson license.

Careers

Graduates have a variety of career options including working for dealers, distributors, and commercial business as service technicians and installers.

Example Careers and Average Wages

	Entry	Average	Experienced
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	$37,300	$53,300	$61,300

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Aire Serv Heating & Air Conditioning	Waterloo, IA
Bergen Plumbing, Heating, & Cooling, Inc.	Waterloo, IA
Dalton Plumbing, Heating, Cooling, Electric, and Fireplaces, Inc.	Cedar Falls, IA
Mike Fereday Heating & Air Conditioning	Waterloo, IA
Independence Plumbing, Heating, & Cooling	Independence, IA
Jim Hundley Heating, Air Conditioning, & Plumbing	Janesville, IA
Plumb Tech, Inc.	Waterloo, IA
Young Plumbing & Heating Co.	Waterloo, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Heating and Air Conditioning program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	40 Arithmetic	24 Pre-Algebra	14	240 Arithmetic 241 Quantitative Reasoning, Algebra, and Statistics	2.00
Reading	58	69	16	239	2.50
Writing	42 Sentence Skills	20	13	229	1.00

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Heating and Air Conditioning Diploma Courses

Award	Diploma
Credits	44
Program Start	Fall
Time to Complete	1 year

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1			
HCR-181	Introduction to HVACR	4WK1	3
HCR-455	Applied Electricity for HVACR	4WK2	4
HCR-456	Applied Electricity II	4WK3	4
HCR-115	Residential Heating Systems	4WK4	4
MAT-772	Applied Math -OR-		3
	Math Elective		3
			Total Credits 18

Term 2

HCR-137	Hydronic Heating Systems	4WK1	3
HCR-171	Refrigeration	4WK2	4
HCR-204	Principles of Air Conditioning	4WK3	4
HCR-143	Alternative Heating and Cooling Systems	4WK4	4
COM-730	Communications		3
		Total Credits	**18**

Term 3 — Summer

HCR-264	Applied Practices	3
HCR-429	HVAC App Controls with Automated Systems	2
HCR-933	Internship — Air Conditioning	3
	Total Credits	**8**

Math Electives

MAT-102	Intermediate Algebra	4
MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Sustainable Construction and Design

The Sustainable Construction and Design program prepares you to design and construct sustainable and highly energy-efficient residences. Learn how to construct new homes that are durable; provide a healthy environment; and use very little energy for heating, cooling, and lighting. Utilizing a “whole systems approach”, you will understand the integral relationship between materials, building techniques, mechanical systems, and subcontractors in the production of energy-efficient and sustainable homes. Learn how to use green and renewable materials, properly install all components and subsystems, and reduce construction site waste.

The program follows the National Center for Construction Education and Research (NCCER) training, assessment, certification, and career development standards for residential construction professionals. Program concepts align with the U.S. Green Building Council's initiatives.

Hands-On Learning Experiences

- **Building Experiences:** Put the theories and concepts you learn into practice with foundations, concrete work, framing, siding, roofing, thermal/moisture protection, drywall installation/finishing, stair construction, finishing, cabinet installation, HVAC, electrical, plumbing, appliances, and landscaping.
- **Energy Audits:** Perform energy audits on existing homes to identify problems, develop solutions, and retrofit solutions cost effectively.
- **Employment Experience:** Gain 256 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Transfer Information

An articulation agreement allows you to transfer your Sustainable Construction and Design coursework to the Technology Management program at the University of Northern Iowa.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates find jobs as building designers, sustainable construction professionals, carpenters, insulation workers, residential site supervisors, and energy auditors.

Graduates are also prepared to continue their education to become construction managers, building inspectors, commercial drafters, electricians, plumbers, and HVAC installers.

Example Careers and Average Wages

	Entry	Average	Experienced
Carpenters	$31,900	$46,000	$53,100
Construction Managers	$57,100	$89,400	$105,500
Drywall and Ceiling Tile Installers	$30,300	$44,700	$52,000
First-Line Supervisors of Construction Trades	$47,200	$66,500	$76,200

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Builders Select	Cedar Falls, IA
Dietz Construction L.L.C.	Nashua, IA
Johnny B's Construction, Inc.	Denver, IA
Peterson Contractors, Inc.	Reinbeck, IA
Steve McDonald Construction	Cedar Falls, IA
Woods Construction, Inc.	Fairbank, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Sustainable Construction and Design AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	76
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1			
CON-140	Concrete Lab ▶	8WK1	2
CON-201	Framing Techniques and Lab I	8WK2	2
CON-102	Introduction to Residential Construction		2
CON-108	Construction Safety		1
CON-130	Concrete Theory		1
CON-131	Site Layout and Blueprint Reading		1
CON-133	Construction Technology Lab		4
CON-302	Building Science I		1
MAT-772	Applied Math -OR-		3
	Math Elective		3
		Total Credits	**17**

Term 2				
CON-121	Carpentry Fundamentals I ►		4	
CON-146	Construction Technology Lab 2 ►		3	
CON-217	Exterior Finishing		3	
HEQ-190	Introduction to Utility Equipment Operations ►		2	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
SPC-101	Fundamentals of Oral Communication -OR-		3	◆
SPC-112	Public Speaking		3	◆
		Total Credits	**18**	

Term 3 — Summer				
CON-933	Employment Training Experience ►		4	
		Total Credits	**4**	

Term 4				
CON-243	Advanced Framing Techniques ►	8WK1	3	
CON-228	Methods of Interior Finishing	8WK2	3	
BUS-102	Introduction to Business		3	
CAD-200	CAD SoftPlan ►		3	
CON-486	Building Science 2 Sustainable Design ►		1	
CON-510	Construction Technology Lab 3 ►		3	
HEQ-200	Utility Equipment Operations ►		1	
		Total Credits	**17**	

Term 5				
CAD-208	SoftPlan 2 ►		3	
COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ► -OR-	O E	3	◆
WBL-110	Employability Skills		3	▣
CON-266	Construction Safety		3	
CON-290	Construction Estimating and Project Management ►		2	
CON-515	Construction Technology Lab 4		4	
ENV-155	Residential Energy Auditing		4	
HCR-200	Manual J and D HVAC Design ►		1	
		Total Credits	**20**	

Math Electives		
MAT-102	Intermediate Algebra	4
MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4

Career Area

EDUCATION

Early Childhood Education

Early Childhood Education

The Early Childhood Education program prepares you for a rewarding career nurturing the growth and development of young children in a variety of settings. You will gain the knowledge and skills necessary to work with infants through preschool-aged children, including:

- Classroom management
- Critical thinking and problem solving
- Child growth and development
- Curriculum planning and assessment
- Effective communication with children, families, and other educators
- Health, safety, and nutrition
- Infant and toddler care
- Positive emotional and behavioral guidance techniques
- Program administration
- State regulations

Essential skills needed to successfully complete the required coursework, include:

- Ability to plan and implement imaginative and creative activities for children
- Demonstrate responsibility and dependability in field placements
- Decision making skills
- Work cooperatively with peers and field placement staff
- Good written and oral communication skills
- Organizational planning

Hands-On Learning Opportunities

- **Field Experiences:** You will gain more than 240 hours of real-world work experience in the Hawkeye's NAEYC accredited Child Development Center and local Head Start, preschool, and early childhood programs. Field experience must be completed during the day.

- **Teaching Portfolio:** You will develop a portfolio of teaching strategies and tools to get you started in your new career. Prepare lesson plans, activity packets, teaching aides, and more.

- **Classroom Technology:** Experience the technology of the modern day classroom, including Owlets in infant classrooms, electronic assessment practices, and interactive technology on whiteboards, iPads, and laptops.

Certifications and Licensure

You may receive the following certifications: First Aid, CPR, Blood Borne Pathogens and Universal Precautions, and Mandatory Reporter.

Hawkeye has not made a determination as to whether the program curriculum meets all other state's educational requirements for licensure or certification. If you wish to work outside the state of Iowa, please contact the state agency in which you hope to work for details about licensure or certification.

Transfer Information

An articulation agreement with Upper Iowa University allows students to transfer their Early Childhood Education coursework to the Birth – Grade 3: Inclusive Settings major.

An articulation agreement with Northwestern University allows students to pursue an Early Childhood Education Teaching degree or a non-licensure Bachelor of Arts degree in Early Childhood Education. Northwestern University's program is 100% online.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates of the two-year program work as lead, assistant, or associate teachers in child care centers, private preschools, child development homes, and private and public schools. With additional experience and credentials, graduates may become a paraeducator in a public school or the director of a child care center.

Diploma graduates work as child care workers, teacher assistants, and early childhood professionals in child care centers, private preschools, child development homes, and private and public schools. Many graduates provide in-home child care and nanny services.

The Early Childhood certificate prepares the student for an entry-level position in a child care program. The certificate meets the course work requirements for the formal education component of the Child Development Associate (CDA) credential.

Example Careers and Average Wages

	Entry	Average	Experienced
Childcare Workers	$17,800	$22,300	$24,500
Preschool Teachers in Head Start and Private Preschools	$20,900	$30,900	$35,800
Teaching Assistants	$20,400	$26,600	$29,700

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Community United Child Care Centers	Waterloo and Cedar Falls, IA
Dike New Hartford Elementary School	Dike, IA
Discoveries Learning Center	Denver, IA
Exceptional Persons, Inc.	Waterloo, IA
Hawkeye Child Development Center	Waterloo, IA
Purple Bloom School	Coralville, IA
The Goddard School	Waukee, IA
Tri-County Child & Family Development Council, Inc.	Waterloo, IA

Business	Location
Trinity Preschool and Child Care	Waterloo, IA
Vinton Shellsburg Community Schools	Vinton, IA
Waterloo Community School District	Waterloo, IA
Waverly Child Care and Preschool	Waverly, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Early Childhood Education program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	40 Arithmetic	24 Pre-Algebra	14	240 Arithmetic 241 Quantitative Reasoning, Algebra, and Statistics	2.00
Reading	58	69	16	239	2.50
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Early Childhood Education AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	61
Program Start	Fall, Spring
Time to Complete	2 years
Course Format	Face-to-Face, Hybrid, Online
Class Meets	Day, evening, or a combination of both to fit your schedule.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
★	Students must pass a DHS Criminal History Record Check and an FBI Fingerprint Check before being placed in Field Experience courses.

Early Childhood Education AAS degree courses may be taken during the day or evening hybrid with some being offered online only. Evening hybrid classes are typically eight weeks and offered from 6:00 – 8:50pm on Tuesdays or Thursdays.

Evening hybrid courses are offered during specific terms. See the Evening AAS Degree Sequence of Study for more information.

Term 1

ECE-103	Introduction to Early Childhood Education	3	
ECE-158	Early Childhood Curriculum I	3	
ECE-170	Child Growth and Development *Offered Online*	3	
ECE-221	Infant/Toddler Care and Education	3	
ENG-105	Composition I ► -OR-	3	▣
COM-781	Written Communication in the Workplace ►	3	▣
		Total Credits 15	

Term 2

ECE-133	Child Health, Safety, and Nutrition		3
ECE-159	Early Childhood Curriculum II		3
ECE-243	Early Childhood Guidance		3
ECE-274	Field Experience I ► *Placed in variety of classrooms 8 hours per week for 16 weeks*	★	2
ECE-944	Field Experience Seminar I *Offered Online*	★	1
MAT-772	Applied Math -OR-		3
	Math Elective		3
		Total Credits 15	

Term 3

ECE-260	Current Topics and Issues in Child Care *Offered Online*	8WK1		2	
ECE-298	Career Strategies for Early Childhood *Offered Online*	8WK2		2	
ECE-125	School Age Care *Offered Online*			2	
ECE-284	Field Experience II ► *Placed in preschool classroom 8 hours per week for 16 weeks*	★		2	
ECE-299	Early Childhood Professional Portfolio *Offered Online*			1	
ECE-945	Field Experience Seminar II ► *Offered Online*	★		1	
EDU-130	Home, School, and Community Relations *Offered Online*			3	
PSY-102	Human and Work Relations -OR-		O E	3	◆
PSY-111	Introduction to Psychology -OR-		O E	3	◆
SOC-110	Introduction to Sociology		O E	3	◆
		Total Credits 16			

Term 4

ECE-250	Advanced Curriculum Planning ► *Offered Online*			3	
ECE-290	Early Childhood Program Administration ► *Offered Online*			3	
EDU-235	Children's Literature *Offered Online*			3	
EDU-246	Including Diverse Learners *Offered Online*			3	
SPC-101	Fundamentals of Oral Communication			3	
		Total Credits 15			

Math Electives	
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

Early Childhood Education Diploma Courses

Award	Diploma
Credits	30
Program Start	Fall, Spring
Time to Complete	1 year
Course Format	Face-to-Face, Hybrid, Online
Class Meets	Day, evening, or a combination of both to fit your schedule.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
★	Students must pass a DHS Criminal History Record Check and an FBI Fingerprint Check before being placed in Field Experience courses.

Early Childhood Education Diploma courses may be taken during the day or evening hybrid with some being offered online only. Evening hybrid classes are typically eight weeks and offered from 6:00 – 8:50pm on Tuesdays or Thursdays.

Evening hybrid courses are offered during specific terms. See the Evening AAS Degree Sequence of Study for more information.

Term 1

ECE-103	Introduction to Early Childhood Education	3	
ECE-158	Early Childhood Curriculum I	3	
ECE-170	Child Growth and Development *Offered Online*	3	
ECE-221	Infant/Toddler Care and Education	3	
ENG-105	Composition I ► -OR-	3	▣
COM-781	Written Communication in the Workplace ►	3	▣
		Total Credits	**15**

Term 2

ECE-133	Child Health, Safety, and Nutrition		3
ECE-159	Early Childhood Curriculum II		3
ECE-243	Early Childhood Guidance		3
ECE-274	Field Experience I ► *Placed in variety of classrooms 8 hours per week for 16 weeks*	★	2
ECE-944	Field Experience Seminar I *Offered Online*	★	1
MAT-772	Applied Math -OR-		3
	Math Elective		3
		Total Credits	**15**

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Early Childhood Education Certificate Courses

Award	Certificate
Credits	12
Program Start	Fall, Spring
Time to Complete	4 months
Course Format	Face-to-Face, Hybrid
Class Meets	Day, evening, or a combination of both to fit your schedule.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

Early Childhood Education Certificate courses may be taken during the day or evening hybrid. Evening hybrid classes are typically eight weeks and offered from 6:00 – 8:50pm on Tuesdays or Thursdays.

Evening hybrid courses are offered during specific terms. See the Evening AAS Degree Sequence of Study for more information.

Term 1		
ECE-103	Introduction to Early Childhood Education	3
ECE-133	Child Health, Safety, and Nutrition	3
ECE-158	Early Childhood Curriculum I -OR-	3
ECE-159	Early Childhood Curriculum II -OR-	3
ECE-221	Infant/Toddler Care and Education	3
ECE-243	Early Childhood Guidance	3
		Total Credits 12

Career Area

HEALTH SCIENCES AND SERVICES

Dental Assisting

Dental Hygiene

Medical Assistant

Medical Laboratory Technology

Nursing

Occupational Therapy Assistant

Physical Therapist Assistant

Respiratory Care

Dental Assisting

The Dental Assisting program prepares you to assist a dentist at chair side, perform receptionist and clinical functions, and carry out selected dental laboratory work as a dental assistant. You will gain knowledge and skills in:

- Dental terminology
- Preventative and oral health education
- Oral and dental anatomy
- Digital dental radiography
- Dental procedures
- Computerized charting and record keeping
- Dental equipment and materials
- Infection control

Hands-On Learning Opportunities

- **Dental Clinic:** Train in the state-of-the-art clinic featuring 18 patient chairs, computerized patient record software, and a complete digital X-ray system under the supervision of licensed dentists and dental professionals.

- **Clinical:** Gain 320 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Certification and Licensure

Graduates are eligible to take the national and state/regional examinations for licensure, which is required to practice in any state. A social security number is required to take the exams and apply for licensure.

Accreditation

The Dental Assisting program is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. Allied Dental Professions graduates are eligible to take necessary Examinations of their choice. Successful completion of board examinations is required to receive a license to practice in the State of Iowa.

Commission on Dental Accreditation
American Dental Association
211 East Chicago Avenue
Chicago, IL 60611
312-440-4653

www.ada.org/en/coda

Policy on Third Party Comments (www.hawkeyecollege.edu/webres/File/programs/dental-programs-third-party-policy-posting.pdf)

Board Pass Rates

Total Students in Program: 15

* No report yet available

Examination		
Dental Assisting National Board Certified Dental Assisting Exam (Not required by Iowa)	Taken	*
	Passed	*
Iowa Dental Board Radiology (Required by Iowa)	Taken	15
	Passed	15 (100%)
Iowa Dental Board Infection Control (Required by Iowa)	Taken	15
	Passed	15 (100%)
Iowa Dental Board Jurisprudence for Iowa License (Required by Iowa)	Taken	15
	Passed	15 (100%)
Job Placement as of July 1, 2019		14 (93 %)

Careers

Graduates can be employed in many dental career areas, including:

- Private or group practice
- General dentistry or specialty practices
- Dental schools
- Federal government dental facilities

Example Careers and Average Wages

	Entry	Average	Experienced
Dental Assistants	$35,600	$44,700	$49,200

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Delta Dental of Iowa	Johnston, IA
Dental Associates of Manchester	Manchester, IA
Henry Schein Dental	Melville, NY
Iowa Department of Public Health	Des Moines, IA
Kimball & Beecher Family Dentistry	Waterloo, IA
Patterson Dental Supply, Inc.	Des Moines, IA
Peoples Community Health Clinic, Inc.	Waterloo, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Dental Assisting program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	← Basic Skills Competency in Math →				
Reading	76	82	19	251	2.80
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Dental Assisting Diploma Courses

Award	Diploma
Credits	47
Program Start	Fall
Time to Complete	1 year

Accepted students must attend a Mandatory Compliance Training session prior to beginning the first day of the program. Students will be notified of the Mandatory Compliance Training at their MORE orientation and registration session.

As a student in a health program at Hawkeye Community College, and to participate in clinicals, you will be required to complete the following screenings: Criminal background check, sex offender registry, child abuse registry, and dependent adult registry. The outcome could possibly affect your opportunities to participate in the clinical setting.

Bloodborne Pathogens, Infectious Disease, and Ionizing Radiation

As a student of the Allied Dental Programs at Hawkeye Community College, individuals may be exposed to bloodborne pathogens, infectious disease, and ionizing radiation. The Dental Assisting and Dental Hygiene Programs both educate students in policies which are outlined in the school catalog, student and faculty handbooks, and program policies and procedures manuals, which are effective in ensuring a safe environment. These items are clearly stated verbally and in written form and given to students, faculty, and staff of Hawkeye Community College through set exposure control guidelines.

Safety regarding ionizing radiation is effective and remains a primary focus, including the design of the radiology facilities, the monitoring of potential radiation through the use of the quarterly TLD badge system, and the registration and monitoring of all equipment in compliance with the State of Iowa regulations for safety. The units used for patient exposure allow for the least amount of radiation exposure when used on the film speed E or the phosphor plate sensors.

The Allied Dental Programs accept responsibility for assuring compliance with federal and state regulations regarding bloodborne pathogens standards and hazardous materials/communications. The Programs recognize the potential for bloodborne infectious disease in patients presenting for care in clinic, sterilization, radiology, and in the dental laboratory. Protocols in all clinic and support areas have been established to integrate the ethical, legal, and regulatory considerations.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
10WK	Course meets for 10 weeks.

You must achieve a minimum "C" grade in all courses that are required to complete the program.

Term 1		
BIO-163	Essentials of Anatomy and Physiology *	4
DEA-103	Orientation to Dental Assisting	2
DEA-258	Dental Anatomy	4
DEA-302	Dental Radiography	3
DEA-412	Dental Materials I	3
DEA-513	Chairside Assisting I	4
	Total Credits	**20**

* Prior completion of both BIO-168 and BIO-173 with a minimum grade of C will be acceptable replacement for BIO-163.

Term 2		
DEA-262	Dental Sciences ►	1
DEA-417	Dental Materials II ►	2
DEA-514	Chairside Assisting II ►	2
DEA-556	Assisting Clinic I	4
DEA-603	Dental Specialties ►	2
DEA-701	Dental Office Procedures ►	1
ENG-105	Composition I ►	3
SPC-101	Fundamentals of Oral Communication	3
	Total Credits	**18**

Term 3 – Summer				
DEA-578	Dental Assisting Clinic II	10WK	5	
DEA-591	Dental Assisting Seminar ►		1	
PSY-102	Human and Work Relations -OR-		3	◆
PSY-111	Introduction to Psychology -OR-		3	◆
SOC-110	Introduction to Sociology		3	◆
		Total Credits	**9**	

Dental Hygiene

The Dental Hygiene program prepares you to provide educational, clinical, and therapeutic disease prevention, health promotion, and oral hygiene services under the supervision of a licensed dentist. You will gain knowledge and skills in:

- Medical terminology
- Oral and dental anatomy
- Digital dental radiography
- Dental procedures
- Oral disease and health
- Computerized charting and record keeping
- Dental equipment and materials
- Infection control
- Oral and dental hygiene practices
- Patient education
- Dental pharmacology
- Pain control techniques
- Public health systems

Hands-On Learning Opportunities

- **Dental Clinic:** Train in the state-of-the-art clinic featuring 18 patient chairs, computerized patient record software, and a complete digital X-ray system under the supervision of licensed dentists and dental professionals.

- **Clinical:** Gain 528 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Certification

Registered dental hygienist (RDH) is the designation for the licensed professional. Graduates of the program are eligible to take the national and state/regional examinations for licensure, which is required to practice in any state. A social security number is required in order to take exams and apply for licensure.

Accreditation

The Dental Hygiene program is accredited by the Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. Allied Dental Professions graduates are eligible to take necessary Examinations of their choice. Successful completion of board examinations is required to receive a license to practice in the State of Iowa.

Commission on Dental Accreditation
American Dental Association
211 East Chicago Avenue
Chicago, IL 60611
312-440-4653

www.ada.org/en/coda

Policy on Third Party Comments: www.hawkeyecollege.edu/webres/File/programs/dental-programs-third-party-policy-posting.pdf

Board Pass Rates

* No report yet available

Examination		
Dental Board Hygiene National Exam (ADA NBDHE) (Required by Iowa)	Attempted 1st Try	16
	Passed 1st Try	14 (88%)
	Attempted 2nd Try	2
	Passed 2nd Try	*
Central Regional Dental Testing Service (CRDTS) Exam (Required by Iowa)	Attempted 1st Try	16
	Passed 1st Try	14 (88%)
	Attempted 2nd Try	2
	Passed 2nd Try	2 (100%)
Jurisprudence Exam for Iowa License (Required by Iowa)	Attempted 1st Try	16
	Passed 1st Try	16 (100%)
Job Placement as of July 1, 2019	13/16	81%

Careers

Our graduates can be employed in many dental areas, including:

- Private dental practices
- Specialty practices
- HMOs
- Long-term care/geriatric centers
- Community outreach organizations

Example Careers and Average Wages

	Entry	Average	Experienced
Dental Hygienists	$66,000	$73,500	$77,200

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Delta Dental of Iowa	Johnston, IA
Dental Associates of Manchester	Manchester, IA
Henry Schein Dental	Melville, NY
Iowa Department of Public Health	Des Moines, IA
Kimball & Beecher Family Dentistry	Waterloo, IA
Patterson Dental Supply, Inc.	Des Moines, IA
Peoples Community Health Clinic, Inc.	Waterloo, IA

Program Admission

In order to be considered for the Dental Hygiene program, students must provide the Admissions office with the appropriate documentation showing completion of all requirements. Appropriate documentation consists of:

- Updated assessment scores. -AND/OR-
- A transcript or academic evaluation showing successful completion of course requirements (i.e. developmental coursework).

It is the student's responsibility to:

- Monitor their progress towards meeting admissions requirements,
- Notify the Admissions office when requirements have been met, and
- Provide the Admissions office evidence of meeting the requirements.

☐ STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Dental Hygiene program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA	Success Course *
Math	85 Elementary Algebra	42 Algebra	19	259 Quantitative Reasoning, Algebra, and Statistics	2.80	MAT-063 Elementary Algebra
Reading	76	82	19	251	2.80	RDG-040 College Preparatory Reading III
Writing	82 Sentence Skills	65	19	253	2.80	ENG-061 College Preparatory Writing II

Applicants can take the ACT assessment or the ACCUPLACER assessment at Hawkeye. Pre-registration is required.

* Success course credits do not apply towards graduation requirements.

STEP 3 Prerequisite Coursework

Prerequisite coursework may be completed at Hawkeye Community College or at any accredited transfer institution. See the suggested sequence of study for a list of prerequisite courses.

Once all prerequisite coursework is completed, contact the Admissions office immediately.

STEP 4 Dental Hygiene Program Admittance/Admission Processing

- The Dental Hygiene program registers 25 students each fall.
- Applicants who successfully meet all admission criteria will be given an Eligible-Start Date to be Determined (ETBD) application status. The Eligible-Start Date to be Determined status date is according to the student's prerequisite completion date. If students share the same prerequisite completion date, the registration date for the final prerequisite course will be used.
- The Admissions Office provides Eligible-Start Date to be Determined candidates with an anticipated start term update two times a year, November and February.
- The Admissions Office begins the admittance process for the following fall in late January.
- It is the student's responsibility to keep their contact information up to date and to continually check their Hawkeye email.

Prior to the First Day of Classes

Prior to the first day of classes, admitted students must have a physical exam with immunization record on Hawkeye Community College form. Students must also attend a Mandatory Compliance Training session.

Changes are taking place within healthcare facilities nationally. These changes directly affect all health programs at Hawkeye Community College. The Joint Commission of Accreditation of Healthcare Organization (JCAHO), which accredits healthcare facilities across the country, enforced background screening September 2004 and has set requirements mandating that students in a healthcare field must now complete the same background check as hospital employees. As a Health student of Hawkeye Community College, you will be required to complete a criminal background check which includes fingerprinting that searches the following databases of sex offender, child abuse and dependent adult registry, and Medicare/Medicaid Fraud. The outcome could possibly affect your opportunities to participate in the clinical setting

Dental Hygiene AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	68
Program Start	Fall
Time to Complete	2 years

As a student in a health program at Hawkeye Community College, and to participate in clinicals, you will be required to complete the following screenings: Criminal background check, sex offender registry, child abuse registry, and dependent adult registry. The outcome could possibly affect your opportunities to participate in the clinical setting.

Bloodborne Pathogens, Infectious Disease, and Ionizing Radiation

As a student of the Allied Dental Programs at Hawkeye Community College, individuals may be exposed to bloodborne pathogens, infectious disease, and ionizing radiation. The Dental Assisting and Dental Hygiene Programs both educate students in policies which are outlined in the school catalog, student and faculty handbooks, and program policies and procedures manuals, which are effective in ensuring a safe environment. These items are clearly stated verbally and in written form and given to students, faculty, and staff of Hawkeye Community College through set exposure control guidelines.

Safety regarding ionizing radiation is effective and remains a primary focus, including the design of the radiology facilities, the monitoring of potential radiation through the use of the quarterly TLD badge system, and the registration and monitoring of all equipment in compliance with the State of Iowa regulations for safety. The units used for patient exposure allow for the least amount of radiation exposure when used on the film speed E or the phosphor plate sensors.

The Allied Dental Programs accept responsibility for assuring compliance with federal and state regulations regarding bloodborne pathogens standards and hazardous materials/communications. The Programs recognize the potential for bloodborne infectious disease in patients presenting for care in clinic, sterilization, radiology, and in the dental laboratory. Protocols in all clinic and support areas have been established to integrate the ethical, legal, and regulatory considerations.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

- ◆ General education course.
- ► Course has a prerequisite and/or corequisite.

Students must achieve a minimum "C" grade in all courses that are required to complete the program.

Term 0 — Prerequisites *		
BIO-168	Human Anatomy and Physiology I	4
BIO-173	Human Anatomy and Physiology II ►	4
BIO-186	Microbiology	4
CHM-122	Introduction to General Chemistry ►	4
HSC-113	Medical Terminology	2
	Total Credits	**18**

* All prerequisites must be completed with a minimum grade of C- and a minimum cumulative prerequisite GPA of 3.00. Students are not eligible for the Iowa Vocational Technical Tuition Grant while taking prerequisite courses.

Term 1		
DHY-111	Head and Neck Anatomy for Dental Hygiene ►	2
DHY-116	Tooth Morphology ►	1
DHY-121	Oral Histology and Embryology ►	2
DHY-160	Oral Radiology	3
DHY-175	Fundamentals of Clinical Dental Hygiene ►	6
	Total Credits	**14**

Term 2

CHM-132	Introduction to Organic and Biochemistry ►	4
DHY-141	General and Oral Pathology ►	3
DHY-187	Clinical Dental Hygiene II ►	3
DHY-188	Clinical Dental Hygiene II Seminar ►	1
DHY-210	Introduction To Periodontology ►	1
DHY-222	Biomaterials for the Dental Hygienist ►	3
DHY-240	Ethics and Jurisprudence ►	1
DHY-262	Special Needs Patient Education ►	1
	Total Credits	**17**

Term 3 — Summer

PSY-111	Introduction to Psychology	3
SOC-110	Introduction to Sociology	3
	Total Credits	**6**

Term 4

BIO-151	Nutrition	3
DHY-131	Pharmacology ►	2
DHY-211	Periodontology ►	2
DHY-254	Community Oral Health I ►	2
DHY-271	Pain Control ►	2
DHY-297	Clinical Dental Hygiene III ►	4
DHY-298	Clinical Dental Hygiene III Seminar ►	2
	Total Credits	**17**

Term 5		
DHY-259	Community Oral Health Service Learning Experience ►	1
DHY-272	Interdisciplinary Health Care ►	2
DHY-307	Clinical Dental Hygiene IV ►	4
DHY-308	Clinical Dental Hygiene Seminar IV ►	1
DHY-901	Independent Study Clinical Dental Hygiene *(optional)*	1
ENG-105	Composition I ►	3
SPC-101	Fundamentals of Oral Communication	3
		Total Credits 14

Medical Assistant

Pursue a high-demand career in the medical field as a medical assistant helping patients navigate the healthcare system and assisting healthcare providers.

As a Medical Assistant program student you will gain the skills necessary to care for patients and assist healthcare providers, including:

- Taking vital signs
- Collecting and preparing lab specimens and performing diagnostic tests
- Administering medication and injections
- Collecting and recording data
- Educating patients

You will also learn administrative clinic duties such as:

- Office management and procedures
- Scheduling and billing practices

Hands-On Learning Opportunities

- **Patient Simulator Lab:** Learn how to handle and react to a variety of patient scenarios in a controlled environment.
- **Practicum:** Gain over 192 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Certification and Licensure

Successful completion of this program qualifies the student to test for license/certification in the state of Iowa.

A graduate of the Medical Assistant program is eligible to take the RMA (Registered Medical Assistant) or CMA (Certified Medical Assistant), national exams recognized by all states for practice as a Medical Assistant.

Accreditation

The Hawkeye Community College Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs
25400 US Highway 19 North, Suite 158
Clearwater, FL 33763
727-210-2350
www.caahep.org

Student Outcomes

	2019	2020
Students entering the program	12	17
Admission cohort retention rate	91.6%	100%
Exam passage rate	100%	100%

Professional Associations and Involvement

Hawkeye has organized the new Blackhawk chapter of the Iowa Society of Medical Assistants (ISMA). Students, graduates, and medical assistants working in the area are eligible to join this community of health professionals and share their experiences and stay on top of the latest trends. Students and members may earn CEUs by participating at the bi-monthly meetings.

Careers

Graduates may find employment working as a medical assistant in doctor's offices, clinics, specialty clinics, or hospitals under the supervision of a licensed healthcare professional. The medical assistant profession is expected to grow by 18%* through 2024 in Iowa.

Example Careers and Average Wages

tbody>

	Entry	Average	Experienced
Medical Assistants	$30,200	$37,700	$41,400

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Program Admissions

In order to be considered for the Medical Assistant program, students must provide the Admissions office with official documents showing completion of all requirements. These documents must show:

- Updated assessment scores. -AND/OR-
- A transcript or academic evaluation showing successful completion of course requirements (i.e. developmental coursework).

It is the student's responsibility to:

- Monitor their progress towards meeting admissions requirements,
- Notify the Admissions office when requirements have been met, and
- Provide the Admissions office evidence of meeting the requirements.

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

Students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA	Success Course *
Math	85 Elementary Algebra	42 Algebra	19	259 Quantitative Reasoning, Algebra, and Statistics	2.80	MAT-063 Elementary Algebra
Reading	76	82	19	251	2.80	RDG-040 College Preparatory Reading III
Writing	82 Sentence Skills	65	19	253	2.80	ENG-061 College Preparatory Writing II

Applicants can take the ACT assessment or the ACCUPLACER assessment at Hawkeye. Pre-registration is required.

* Success course credits do not apply towards graduation or the diploma.

STEP 3 Prerequisite Coursework

Successfully complete all program prerequisite courses with a minimum C- grade with the exception of BIO-168 Human Anatomy and Physiology I with lab which requires a minimum grade of C.

Once all prerequisite coursework is completed, contact the Admissions office immediately.

STEP 4 Program Admittance

The Medical Assistant program registers 20 students each fall (evening option) and spring (day option).

Applicants who successfully meet all admission criteria will be given an Eligible-Start Date to be Determined application status. The Eligible-Start Date to be Determined status date is according to the student's prerequisite completion date. If students share the same prerequisite completion date, the registration date for the final prerequisite course will be used.

The Admissions office provides Eligible-Start Date to be Determined candidates (if necessary) with anticipated start term updates up to two times a year in November and February.

The admittance process is ongoing. Fall registration typically begins mid March and spring registration starts early November.

It is the student's responsibility to keep their contact information up to date and to routinely check their Hawkeye email.

Changes are taking place within healthcare facilities nationally. These changes directly affect all health programs at Hawkeye Community College. The Joint Commission of Accreditation of Healthcare Organization (JCAHO), which accredits healthcare facilities across the country, enforced background screening September 2004 and has set requirements mandating that students in a healthcare field must now complete the same background check as hospital employees. As a Health student of Hawkeye Community College, you will be required to complete a criminal background check which includes fingerprinting that searches the following databases of sex offender, child abuse and dependent adult registry, and Medicare/Medicaid Fraud. The outcome could possibly affect your opportunities to participate in the clinical setting

Medical Assistant Diploma Courses

Award	Diploma
Credits	33
Program Start	Fall, Spring
Time to Complete	1 year
Class Meets	Day or evening

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

- ◆ General education course.
- ► Course has a prerequisite and/or corequisite.

Term 0 — Prerequisites

BIO-168	Human Anatomy and Physiology I *Minimum C grade required.*	4	
HSC-108	Introduction to Health Professions *Minimum C- grade required.* *Must be completed at Hawkeye Community College*	2	
HSC-113	Medical Terminology *Minimum C- grade required.*	2	
PSY-111	Introduction to Psychology *Minimum C- grade required.*	3	
SPC-101	Fundamentals of Oral Communication -OR-	3	◆
ENG-105	Composition I ► *Minimum C- grade required.*	3	◆
		Total Credits 14	

Term 1		
BIO-173	Human Anatomy and Physiology II ►	4
MAP-111	Medical Office Management I	3
MAP-225	Med Lab Procedures I ►	4
MAP-342	Clinical Assisting I ►	3
MAP-402	Medical Law and Ethics	2
	Total Credits	**16**

Term 2		
MAP-117	Medical Office Management II ►	3
MAP-230	Medical Laboratory Procedures II ►	4
MAP-343	Clinical Assisting II ►	3
MAP-512	Medical Assisting Pharmacology ►	2
	Total Credits	**12**

Term 3		
MAP-841	Medical Assisting Capstone ►	2
MAP-941	Medical Assistant Practicum ►	3
	Total Credits	**5**

Medical Laboratory Technology

The Medical Laboratory Technology program prepares you with the knowledge and skills necessary to perform general tests in all laboratory areas, including blood banking, hematology, immunology, and microbiology. Working under the supervision of a medical technologist or pathologist, you will learn to test and analyze samples for clues to the absence, presence, extent, and causes of infections and diseases. You will also learn:

- Clinical laboratory techniques
- Lab equipment maintenance
- Sample collection and storage procedures
- Results reporting and record keeping

Certification

Graduates are eligible to take the national certification exam from the American Society for Clinical Pathology (ASCP).

Academic Affiliate Program

Hawkeye has academic affiliate arrangements that allows you to complete the first two semesters of the Medical Laboratory Technology program at an academic affiliate college, then complete the rest of the program at Hawkeye. Academic affiliate colleges include:

- North Iowa Area Community College (NIACC), Mason City, Iowa
- Northeast Iowa Community College (NICC), Calmar and Peosta, Iowa

Accreditation

This program is accredited by the National Accrediting Agency for Clinical Laboratory Services (NAACLS), a non-profit organization that independently accredits clinical laboratory science programs.

NAACLS
5600 N. River Road, Suite 720
Rosemont, IL 60018-5119
773-714-8880

Program Outcomes

Hawkeye Medical Laboratory Technology program outcomes are defined by NAACLS and reported using a three-year average from 2019–2021.

- **Hawkeye Medical Laboratory Technology Placement Rate:** 100%
  Employment in the laboratory field or pursuit of further education within 1 year of graduation.

- **Hawkeye Medical Laboratory Technology Graduation Rate:** 93%
  The percentage of students completing the program who started the final half of the program defined as the start of the fall semester in the second year.

- **Hawkeye Medical Laboratory Technology Certification Exam (ASCP-BOC MLT):** 95%
  Percentage of students who pass the exam taken within 1 year of graduation.

Careers

Graduates find employment in hospital, clinic, and independent laboratories as medical and clinical laboratory technicians.

Example Careers and Average Wages

	Entry	Average	Experienced
Clinical Laboratory Technologists and Technicians	34,700	$49,700	$57,200

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Mercy Iowa City	Iowa City, IA
MercyOne North Iowa Medical Center	Mason City, IA
MercyOne	Waterloo and Cedar Falls, IA
MercyOne Dubuque	Dubuque, IA
UnityPoint Health - Allen Hospital	Waterloo, IA
UnityPoint Health Finley Hospital	Dubuque, IA
University of Iowa Hospitals and Clinics	Iowa City, IA

Program Admission

In order to be considered for the Medical Laboratory Technology program, students must provide the Admissions office with official documents showing completion of all requirements. These documents must show:

- Updated assessment scores. -AND/OR-
- A transcript or academic evaluation showing successful completion of course requirements (i.e. developmental coursework).

It is the student's responsibility to:

- Monitor their progress towards meeting admissions requirements,
- Notify the Admissions office when requirements have been met, and
- Provide the Admissions office evidence of meeting the requirements.

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Required Biology Course and Demonstrate College Readiness

In order to be eligible for the Medical Laboratory Technology program, all students must:

1. Meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.
2. Successfully complete, with a C- grade or higher, a minimum of one year of high school biology or any college-level general education biological sciences course.

While Hawkeye Community College is accepting Pass/Fail grades as an institution, due to accreditation, Hawkeye is **not accepting College or High School Pass/Fail grades for any admission criteria**.

While working to meet these requirements, students will be accepted into the Medical Laboratory Technology pre-program. Pre-program students are able to complete the necessary success courses at the same time they are working on the required general education coursework, assuming all individual course prerequisites are satisfied. See the Medical Laboratory Technology Suggested Sequence of Study for the general education ◆ and program specific ★ courses.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	85 Elementary Algebra	42 Algebra	19	259 Quantitative Reasoning, Algebra, and Statistics	2.80
Reading	76	82	19	251	2.80
Writing	82 Sentence Skills	65	19	253	2.80

Applicants can take the ACT assessment or the ACCUPLACER assessment at Hawkeye. Pre-registration is required.

Success Courses

Success courses can be taken at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with a program advisor.

Success course credits do not apply towards graduation requirements.

STEP 3 Program Acceptance

Applicants who have completed all admissions requirements in steps 1 and 2 will be offered acceptance based on the date their applicant file was completed. If many students share the same date for completing their applicant file, the second criteria used will be the GPA from the prerequisite courses.

Medical Laboratory Technology AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	81
Program Start	Fall, Spring
Time to Complete	2 years

As a student in a health program at Hawkeye Community College, and to participate in clinicals, you will be required to complete the following screenings: Criminal background check, sex offender registry, child abuse registry, and dependent adult registry. The outcome could possibly affect your opportunities to participate in the clinical setting.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

- ◆ General education course.
- ► Course has a prerequisite and/or corequisite.
- ★ Program specific courses applicants meeting the general admission requirements may take prior to full acceptance to the Medical Laboratory Technology program.

Students must achieve a minimum C- grade in all courses required to complete the program.

Additional prerequisite coursework is required for program acceptance. See Admissions Requirements for more information.

Term 1 — Fall				
BIO-163	Essentials of Anatomy and Physiology		4	
CHM-122	Introduction to General Chemistry ►		4	
MLT-101	Introduction to Lab Science	★	2	
PSY-111	Introduction to Psychology -OR-		3	◆
SOC-110	Introduction to Sociology		3	◆
SPC-101	Fundamentals of Oral Communication		3	
		Total Credits	**16**	

Term 2 — Spring

BIO-113	General Biology II -OR-		4	◆
CHM-132	Introduction to Organic and Biochemistry ►		4	◆
BIO-186	Microbiology		4	
ENG-105	Composition I ►		3	
HSC-113	Medical Terminology	★	2	
MLT-103	Lab Mathematics	★	3	
MLT-120	Urinalysis	★	3	
		Total Credits	**19**	

Term 3 — Summer

MLT-110	Fundamental Lab Techniques	★	3
MLT-130	Hematology ►	★	3
MLT-250	Clinical Microbiology ►		4
		Total Credits	**10**

Term 4 — Fall

MLT-230	Advanced Hematology ►	★	3
MLT-233	Hemostasis and Thrombosis ►		2
MLT-240	Clinical Chemistry I ►		7
MLT-252	Parasitology	★	1
MLT-260	Immunohematology ►		4
MLT-270	Immunology and Serology ►		2
		Total Credits	**19**

Term 5 — Spring

MLT-285	Clinical Practicum: Chemistry ►		4
MLT-287	Clinical Practicum: Hematology ►		4
MLT-288	Clinical Practicum: Microbiology ►		4
		Total Credits	**12**

Term 6 — Summer		
MLT-283	Clinical Practicum: Urinalysis ►	1
MLT-284	Clinical Practicum: Immunohematology ►	2
MLT-286	Clinical Practicum: Immunology and Serology ►	1
MLT-291	Lab Survey and Review ►	1
		Total Credits 5

Nursing

Nursing is a career that allows upward mobility from CNA, LPN, RN, BSN, to MSN.

Practical Nursing (LPN) Program

The Practical Nursing program, an option of the Associated Degree Nursing program, prepares you to become a licensed practical nurse (LPN) to care for patients of all ages with a variety of health conditions. You will gain the knowledge and skills in:

- Vital signs
- Infection control
- Pharmacology
- Lifespan growth and development

Course requirements can be completed within one year. Upon successful completion of the Practical Nursing coursework, you can continue your studies to become a registered nurse (RN).

Associate Degree Nursing (RN) Program

The Associate Degree Nursing (ADN) program prepares you to become a registered nurse (RN) and care for patients of all ages with a variety of health conditions. You will gain the knowledge and skills in:

- Mastery of assessment and clinical skills
- Legal and ethical practices
- Medical and surgical nursing
- Maternal-child, Mental health, Community

Hands-On Learning Experiences

- **Van Gerpen Patient Simulator Laboratory:** Train in the state-of-the-art simulation lab using realistic full-body manikins and simulators to replicate a range of hospital settings and patient scenarios in a controlled environment.

- **Clinical:** Gain real-world work experience in local clinics and hospitals, public mental health institutions, and community health agencies ensuring you have the skills you need to succeed in your future career.

Licensure and Certification

Upon completion of the Practical Nursing (LPN) coursework, you will be eligible to take the Licensed Practical Nurse (LPN) licensure exam.

Upon completion of the Associate Degree Nursing (RN) coursework, you will be eligible to take the Registered Nurse (RN) licensure exam.

These national and state/regional examinations for licensure are required to practice in any state. A social security number is required to take the exams and apply for licensure.

This program prepares the student for licensure in Iowa. See the following resources for licensure information regarding other states:

- **National Council of State Boards of Nursing (NCSBN) Board of Nursing Professional Licensure Requirements:** Professional nursing licensure requirements by state.
  www.ncsbn.org/14730.htm

- **State Licensure Google Sheet:** Identify the states in which Hawkeye's Nursing program requirements fulfill the state guidelines for professional licensure and certification.
  docs.google.com/spreadsheets/d/1WiIFhsbjvrI7D38ZkKhaVlDsAyid9ne3fS6-GsJlZzA/edit?usp=sharing

- **Contact information for each state's professional licensure regulatory agency:** www.ncsbn.org/contact-bon.htm

First time NCLEX—PN pass rate: 100%
First time NCLEX—RN pass rate: 97.44%

Mission, Goals, and Purpose

The mission of the Hawkeye Community College Nursing program is to prepare nurses for entry level professional nursing practice that meets the diverse health care needs of individuals, groups, and communities. Faculty facilitate and guide the education of students in the art and science of nursing to provide quality, ethical, holistic, and culturally competent collaborative care.

The goals of the nursing program at Hawkeye Community College are:

- To facilitate student success through an evidence-based curriculum that is student-centered.
- To provide a curriculum with dynamic clinical and simulation experiences.
- To provide a fair, firm, and consistent educational experience that prepares students for entry level practice.
- To prepare students for successful completion of the licensure examination.
- To maintain a nursing program that meets Iowa Board of Nursing regulatory standards.

Professional Affiliation

This program is approved by the Iowa Board of Nursing.

Iowa Board of Nursing
400 S.W. 8th Street Suite B
Des Moines, IA 50309

Transfer Information

Hawkeye Community College is a member of the Iowa Articulation Plan, which creates a career path for Associate Degree Nursing to a Bachelor of Science in Nursing with a minimum of time and redundancy. For more information, contact a program advisor.

Careers

Graduates work in hospitals, physician's clinics, and specialty clinics and departments such as pediatrics, intensive care, surgical, psychiatric, obstetrics, and cardiology.

Example Careers and Average Wages

	Entry	Average	Experienced
Nursing Assistants	$27,000	$31,500	$33,700
Home Health and Personal Care Aides	$22,900	$28,500	$31,200
Licensed Practical Nurses (LPN)	$38,800	$45,900	$49,400
Registered Nurses	$51,500	$62,600	$68,100

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Mayo Clinic	Rochester, MN
MercyOne	Waterloo and Cedar Falls, IA
UnityPoint Health—Allen Hospital	Waterloo, IA
Universal Pediatrics	Cedar Rapids, IA
University of Iowa Hospitals and Clinics	Iowa City, IA
Waverly Health Center	Waverly, IA

Program Admission

In order to be considered for the Associate Degree Nursing (RN) or Practical Nursing (LPN) program, students must provide the Admissions office with official documents showing completion of all requirements. These documents must show:

- Updated assessment scores. -AND/OR-
- A transcript or academic evaluation showing successful completion of course requirements (i.e. developmental coursework).

It is the student's responsibility to:

- Monitor their progress towards meeting admissions requirements,
- Notify the Admissions office when requirements have been met, and
- Provide the Admissions office evidence of meeting the requirements.

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

If you are a graduate of an accredited Practical Nursing program, please see the Admission Requirements for Practical Nursing Graduates then skip to Step 5.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Nursing program, students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA	Success Course *
Math	85 Elementary Algebra	42 Algebra	19	259 Quantitative Reasoning, Algebra, and Statistics	2.80	MAT-063 Elementary Algebra
Reading	76	82	19	251	2.80	RDG-040 College Preparatory Reading III
Writing	82 Sentence Skills	65	19	253	2.80	ENG-061 College Preparatory Writing II

Applicants can take the ACT assessment or the ACCUPLACER assessment at Hawkeye. Pre-registration is required.

* Success course credits do not apply towards graduation requirements.

STEP 3 Prerequisite Coursework

Students who do not have a Practical Nursing degree must successfully complete the following:

- All program prerequisite courses with a minimum C- grade with the exception of BIO-168 Human Anatomy and Physiology I with lab and BIO-173 Human Anatomy and Physiology II with lab which require a minimum grade of B-.
- Two semesters of high school chemistry or CHM-122 Introduction to General Chemistry with a minimum C- grade.

While Hawkeye Community College is accepting Pass/Fail grades as an institution, due to accreditation, Hawkeye is **not accepting College or High School Pass/Fail grades for any admission criteria**.

STEP 4 TEAS Exam

Nursing program applicants must successfully pass the Test of Essential Academic Skills (TEAS) Exam with a composite score of 64% or higher. This exam must be taken at Hawkeye Community College and students will have a maximum of five attempts at the exam.

STEP 5 Program Acceptance

Applicants who have completed all admissions requirements in steps 1–4 will be accepted into the next available seat to the program.

If the number of eligible students exceeds the number of available seats, students will be accepted in the following order:

1. Completion date of all required prerequisite coursework.
2. Eligibility date — Determined by either:
    - The date the student registered for their final prerequisite course at Hawkeye OR
    - The date the Admissions office received transcripts showing completion of prerequisite courses at another accredited institution.
3. Grade Point Average — Determined by grades in prerequisite courses.

Accepted Students

Students accepted to the Nursing program must:

- Complete a nursing program orientation session where they will register for program courses with faculty advisors.
- Be Healthcare Provided CPR certified.
- Have a physical exam in Hawkeye Community College format prior to the first day of clinical coursework. Admission to the Nursing program is not based on the physical examination.

Changes are taking place within healthcare facilities nationally. These changes directly affect all health programs at Hawkeye Community College. The Joint Commission of Accreditation of Healthcare Organization (JCAHO), which accredits healthcare facilities across the country, enforced background screening September 2004 and has set requirements mandating that students in a healthcare field must now complete the same background check as hospital employees. As a Health student of Hawkeye Community College, you will be required to complete a criminal background check which includes fingerprinting that searches the following databases of sex offender, child abuse and dependent adult registry, and Medicare/Medicaid Fraud. The outcome could possibly affect your opportunities to participate in the clinical setting

Admission Requirements for Practical Nursing Program Graduates

Students who have graduated from a Practical Nursing program will need to inform the Admissions office as well as meet the following admission requirements in order to be eligible for admission to the Associate Degree Nursing program:

1. Provide proof via an official transcript of successful completion of an accredited Practical Nursing program.

2. Complete, with a minimum grade of C-, either two semesters of high school chemistry or CHM-122 Introduction to General Chemistry or equivalent.

3. Complete, with a minimum grade of B-, BIO-168 Human Anatomy and Physiology I with lab and BIO-173 Human Anatomy and Physiology II with lab.

Applicants who meet all three of the above criteria will be placed on the Eligible for Acceptance list.

Placement on the list is determined by the GPA attained from BIO-168 and BIO-173 Human Anatomy & Physiology I & II. If applicants share the same GPA, the second criteria used will be a file completion date, which is the date the applicant registered for their last prerequisite course (BIO-168, BIO-173, or CHM-122) or provided documentation of these courses being met from another accredited institution.

Nursing: Associate Degree Nursing AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	67
Program Start	Fall, Spring
Time to Complete	2 years
Course Format	Face-to-Face, Hybrid, Online

As a student in a health program at Hawkeye Community College, and to participate in clinicals, you will be required to complete the following screenings: Criminal background check, sex offender registry, child abuse registry, and dependent adult registry. The outcome could possibly affect your opportunities to participate in the clinical setting.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 0 — Prerequisites

BIO-168	Human Anatomy and Physiology I *Minimum B- grade required.*	4
BIO-173	Human Anatomy and Physiology II ► *Minimum B- grade required.*	4
ENG-105	Composition I ► *Minimum C- grade required.*	3
HSC-108	Introduction to Health Professions * *Minimum C- grade required.*	2
HSC-168	Nurse Aide ** *Minimum C- grade required.*	3.5
		Total Credits 16.5

Chemistry prerequisite: In addition to the listed prerequisite coursework, students must have completed two semesters of high school chemistry or CHM-122 Introduction to General Chemistry with a minimum C- grade to be eligible for acceptance in the nursing program. See Admissions Requirements for more information.

* HSC-108 Introduction to Health Professions must be taken at Hawkeye Community College

** HSC-168 Nurse Aide must be completed through an accredited college or show proof of CNA Registry. Applicants will need to provide an official transcript showing successful course completion or work with Admissions to confirm being on the Iowa Direct Care Worker Registry.

Students must achieve an 80% in all non-prerequisite courses required to complete the program.

Term 1				
PNN-117	Nursing Clinical I ►	8WK1	1	
PNN-118	Nursing Clinical II ►	8WK2	1	
MAT-110	Math for Liberal Arts ► -OR-		3	◆
MAT-102	Intermediate Algebra -OR-		4	◆
MAT-121	College Algebra ► -OR-		4	◆
	Math Elective			
PNN-115	Introduction to Nursing ►		4	
PNN-116	Introduction to Nursing Skills Lab ►		2	
PNN-122	Introduction to Pharmacology ►		2	
PNN-216	Health Promotion & Maintenance Across the Lifespan ►		2	
		Total Credits	**15**	

Term 2			
PNN-214	Basic Health Alterations A ►	8WK1	3
PNN-218	Nursing Clinical III ►	8WK1	1
PNN-215	Basic Health Alterations B ►	8WK2	3
PNN-221	Nursing Clinical IV ►	8WK2	1
PNN-319	Issues and Trends in Practical Nursing Leadership ►	8WK2	2
BIO-151	Nutrition		3
PNN-219	Foundations of Nursing Skills Lab ►		2
		Total Credits	**15**

Students are strongly encouraged to take the LPN licensure exam after Term 2 coursework has been completed. Students will then have the option to begin working as an LPN.

Term 3

ADN-121	Transition to Professional Nursing ►	8WK1	2
ADN-128	Community and Mental Health Nursing ►	8WK2	2
ADN-122	Advanced Nursing Skills ►		2
ADN-124	Complex Health Alterations ►		3
ADN-125	Nursing Clinical V ►		2
ADN-231	Advanced Pharmacology ►		2
PSY-111	Introduction to Psychology		3
SPC-101	Fundamentals of Oral Communication		3
		Total Credits	**19**

Term 4

ADN-224	Complex Health Alterations B ►	3
ADN-225	Nursing Clinical VI ►	2
ADN-226	Complex Maternal Child Health Alterations ►	3
ADN-227	Nursing Clinical Community and Special Populations ►	2
ADN-331	Issues in Nursing Management ►	2
ADN-333	Holistic Client Care ►	2
BIO-186	Microbiology	4
	Total Credits	**18**

Math Electives

MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Practical Nursing Diploma Courses

Award	Diploma
Credits	30
Program Start	Fall, Spring
Time to Complete	1 year
Course Format	Face-to-Face, Hybrid, Online

As a student in a health program at Hawkeye Community College, and to participate in clinicals, you will be required to complete the following screenings: Criminal background check, sex offender registry, child abuse registry, and dependent adult registry. The outcome could possibly affect your opportunities to participate in the clinical setting.

You must be CPR certified and have a health physical on file at Hawkeye prior to the first day of clinical course work.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 0 — Prerequisites			
BIO-168	Human Anatomy and Physiology I *Minimum B- grade required.*		4
BIO-173	Human Anatomy and Physiology II ► *Minimum B- grade required.*		4
ENG-105	Composition I ► *Minimum C- grade required.*		3
HSC-108	Introduction to Health Professions * *Minimum C- grade required.*		2
HSC-168	Nurse Aide ** *Minimum C- grade required.*		3.5
		Total Credits	**16.5**

Chemistry prerequisite: In addition to the listed prerequisite coursework, students must have completed two semesters of high school chemistry or CHM-122 Introduction to General Chemistry with a minimum C- grade to be eligible for acceptance in the nursing program. See Admissions Requirements for more information.

* HSC-108 Introduction to Health Professions must be taken at Hawkeye Community College

** HSC-168 Nurse Aide must be completed through an accredited college or show proof of CNA Registry. Applicants will need to provide an official transcript showing successful course completion or work with Admissions to confirm being on the Iowa Direct Care Worker Registry.

Students must achieve an 80% in all non-prerequisite courses required to complete the program.

Term 1				
PNN-117	Nursing Clinical I ►	8WK1	1	
PNN-118	Nursing Clinical II ►	8WK2	1	
MAT-110	Math for Liberal Arts ► -OR-		3	◆
MAT-102	Intermediate Algebra -OR-		4	◆
MAT-121	College Algebra ► -OR-		4	◆
	Math Elective			
PNN-115	Introduction to Nursing ►		4	
PNN-116	Introduction to Nursing Skills Lab ►		2	
PNN-122	Introduction to Pharmacology ►		2	
PNN-216	Health Promotion & Maintenance Across the Lifespan ►		2	
		Total Credits	**15**	

Term 2

PNN-214	Basic Health Alterations A ►	8WK1	3
PNN-218	Nursing Clinical III ►	8WK1	1
PNN-215	Basic Health Alterations B ►	8WK2	3
PNN-221	Nursing Clinical IV ►	8WK2	1
PNN-319	Issues and Trends in Practical Nursing Leadership ►	8WK2	2
BIO-151	Nutrition		3
PNN-219	Foundations of Nursing Skills Lab ►		2
		Total Credits	**15**

Math Electives

MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Occupational Therapy Assistant

The Occupational Therapy Assistant program prepares you with the entry-level skills and knowledge to provide persons, groups, and populations with treatments that improve their ability to achieve independence in everyday activities and to enjoy life to its fullest.

Students will have opportunities to:

- Develop and provide interventions that focus on occupations for persons, groups, and populations experiencing various impairments.
- Monitor persons and groups progress while following an occupational therapy plan of care.
- Effectively educate and communicate with persons, groups, populations, families, and other healthcare providers.
- Teach persons, groups, and populations to use adaptive equipment or modifying tasks to increase successful participation in meaningful occupations.
- Educate persons, groups, and populations in health and wellness.
- Meet with community experts and learn about their area of expertise.
- Use knowledge gained to participate in fieldwork at a variety of community and medical settings.
- Investigate topics as you begin your pathway to a life-long learner.
- Interact with other health profession students.

Students should be aware that a felony conviction can have a serious and negative impact on eligibility for certification and NBCOT Early Determination Review as an Occupational Therapy Assistant.

Hands-On Learning Opportunities

- Occupational Therapy Assistant students gain hands-on experience through patient scenario simulation. These scenarios replicate all rehabilitation settings.
- Clinical: Gain 600 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.
- Education and use of a variety of lab assessments and assistive devices.

Accreditation

ACOTE®
Accreditation Council for Occupational Therapy Education

The associate-degree-level occupational therapy assistant program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 6116 Executive Boulevard, Suite 200, North Bethesda, MD 20852-4929. ACOTE's telephone number c/o AOTA is (301) 652-AOTA and its web address is www.acoteonline.org. Graduates of the program will be eligible to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). In addition, all

states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination. Note that a felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

Hawkeye Community College Accreditation: www.hawkeyecollege.edu/about/institutional-research-and-accreditation

National Certification Examination

All states require licensure in order to practice. State licensure is usually based on the results of the National Board for Certification in Occupational Therapy (NBCOT) Certification Examination.

Successful completion of this program qualifies the student to test for license/certification in the state of Iowa.

Graduates who successfully pass the National Board Certification for Occupational Therapy and have their scores immediately sent to designated states are able to practice once the individual state's licensure criteria is met. Graduates who have been practicing and plan to move to a different state need to review that state's occupational therapy practice acts. As a member of the American Occupational Therapy Association (AOTA) you have access to the OTA licensure requirements by state.

Graduation Year	Students Entering/Graduating	Graduation Rate	Number of First-Time Test Takers	Percentage of First-Time Test Takers Who Passed the Exam
2017	16/16	100%	16	100%
2018	18/15	83%	14	93%
2019	17/15	88%	9	60%
2020	16/13	81%	11	100%
2021*	8/4	50%	4	100%
Total	**88/63**	**80%**	**54**	**90%**

* COVID-19 Pandemic

Occupational Therapy Assistant Program Mission

The mission of the Occupational Therapy Assistant program is to prepare qualified healthcare practitioners to work in collaboration with others for a better community and inspire lifelong learning.

Occupational Therapy Assistant Program Mission in Alignment with the Hawkeye Community College Mission

The Occupational Therapy Assistant program mission mirrors that of the College in stressing the importance "empowering students and enriching communities" (Hawkeye Community College, 2021) and "improving the communities we serve" (Hawkeye Community College, 2021). As occupational therapy practitioners, Occupational Therapy Assistant program

graduates will learn the value of continual skill improvement and the importance of continued expansion of their treatment techniques and strategies. Investigation of global-wide solutions to impairment of occupational performance will be explored in multiple didactic courses and fieldwork experiences, furthering students' readiness for providing occupational therapy services to diverse populations within the communities they live.

Associations

- The American Occupational Therapy Association, Inc. (AOTA)
- Iowa Occupational Therapy Association (IOTA)

Careers

Occupational therapy assistants work in a wide variety of settings including homes, hospitals, rehabilitation clinics, community centers, outpatient facilities, schools, and nursing homes.

Example Careers and Average Wages

	Entry	Average	Experienced
Occupational Therapy Assistants	$44,700	$56,000	$61,700

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Blue Stone Therapy	Locations throughout Iowa
Mercy Medical Center	Cedar Rapids, Iowa
Millennium Therapy	Locations throughout Iowa
Northern Iowa Therapy	Locations throughout Iowa
Rehab Visions	Locations throughout Iowa
Reliant Rehab	Locations throughout Iowa
Unity Point — Allen Hospital	Waterloo, IA
Western Home Communities	Cedar Falls, IA

Program Admission

In order to be considered for the Occupational Therapy Assistant program, students must provide the Admissions office with the appropriate documentation showing completion of all requirements. Appropriate documentation consists of:

- Updated assessment scores. -AND/OR-
- A transcript or academic evaluation showing successful completion of course requirements (i.e. developmental coursework).

It is the student's responsibility to:

- Monitor their progress towards meeting admissions requirements,
- Notify the Admissions office when requirements have been met, and
- Provide the Admissions office evidence of meeting the requirements.

☐ STEP 1 Applying to Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

☐ STEP 2 Demonstrate College Readiness

Students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

ACT	COMPASS	ACCUPLACER	ACCUPLACER Next Generation	Success Course *
19 Math	42 Algebra	85 Elementary Algebra	259 QAS	MAT-063 Elementary Algebra
19 English	65 English	82 Sentence Skills -OR- 06 Essay	253 Writing	ENG-061 College Preparatory Writing II
19 Reading	82 Reading	76 Reading	251 Reading	RDG-040 College Preparatory Reading III

Applicants can take the ACT assessment or the ACCUPLACER assessment at Hawkeye. Pre-registration is required.

* Success course credits do not apply towards graduation requirements.

☐ STEP 3 Pre-Occupational Therapy Assistant Program

Prerequisite Coursework

- Prerequisite coursework may be completed at Hawkeye Community College or transferred in from an accredited educational institution, with the exception of HSC-108 Introduction to Health Professions, which must be completed at Hawkeye.

- All prerequisite courses must be completed with a grade of a "C-" or higher. BIO-168 and BIO-173 must be completed with a grade of "B-" or higher.

- Students must achieve a 2.75 minimum cumulative GPA in the prerequisite courses.

See the suggested sequence of study for a list of prerequisite courses.

Learning Contract Process

Students who may be missing a few fall prerequisite courses can initiate the Learning Contract Process to complete fall prerequisite coursework and continue on in the program.

To enroll in the Learning Contract Process:

1. Students must have a GPA of 2.75 or higher.
2. Contact the Program Director to request the Learning Contract Process documents.
3. Complete and return the Learning Contract Process documents to the Program Director no later than one week before the spring semester.
4. The Program Director, Academic Fieldwork Coordinator, and assigned Pre-Program Advisor will meet to discuss the information. Once a decision has been made, the Program Director will email the student informing them of the decision.
5. If approved, the student will work with their Pre-Program Advisor to register for spring courses. Students must register for 13 credits or less in the first spring semester.
6. Approved students will meet with the Program Director, either virtually or face-to-face, to finalize the Learning Contract Process.

STEP 4 Program Admittance / Admissions Processing Points

The Occupational Therapy Assistant program registers 20 students each spring.

Applicants who successfully meet all admission criteria will be given an Eligible-Start Date to be Determined application status. The Eligible-Start Date to be Determined status date is according to the student's prerequisite completion date. If students share the same prerequisite completion date, the registration date for the final prerequisite course will be used.

The Admissions Office admits Eligible-Start Date to be Determined candidates ongoing for the next available processing term. Once seat capacity has been reached remaining Eligible-Start Date to be Determined candidates will continue to be considered and contacted accordingly, should a seat become available.

It is the student's responsibility to keep their contact information up to date and to continually check their Hawkeye email.

Mandatory Seminar

The Occupational Therapy Assistant program will offer mandatory one-hour seminars in the fall semester. Students must participate in one of the mandatory seminars prior to complete the admission process.

Background Screening

Changes are taking place within healthcare facilities nationally. These changes directly affect all health programs at Hawkeye Community College. The Joint Commission of Accreditation of Healthcare Organization (JCAHO), which accredits healthcare facilities across the country, enforced background screening September 2004 and has set requirements mandating that students in a healthcare field must now complete the same background check as hospital employees. As a Health student of Hawkeye Community College, you will be required to complete a criminal background check which includes fingerprinting that searches the following databases of sex offender, child abuse and dependent adult registry, and Medicare/Medicaid Fraud. The outcome could possibly affect your opportunities to participate in the clinical setting and the ability to take the national examination.

Occupational Therapy Assistant AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	59
Enrollment	Full-time
Program Start	Spring
Time to Complete	1½ years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
8WK1	Course meets the first 8 weeks of the term.
8KW2	Course meets the second 8 weeks of the term.

Program Technology Requirements

The prerequisite courses for the Occupational Therapy Assistant program consists of online, hybrid, and face-to-face courses. **Students need to have a working computer**, preferably a laptop, **and internet service** to complete assignments and assessments in the prerequisite and Occupational Therapy Assistant professional courses.

Computer requirements:

- Processor: i3 or i5
- RAM: 8 – 16 GB
- Hard drive: 256 – 512 GB SSD. No hybrid drives.

Prerequisite Coursework

A minimum cumulative GPA of 2.75 is required for prerequisite courses with no lower than a "C-" grade in any individual prerequisite course except BIO-168 and BIO-173 which require a minimum grade of "B-".

Students are responsible for retaining knowledge of completed college courses, in particular, Anatomy and Physiology courses. This information will be used in many of the OTA courses. There are many videos online in which students are recommended to review to prepare for the OTA courses.

All coursework must be scheduled to be completed no later than the end of the spring semester prior to the program's summer start.

You are not eligible for the Iowa Vocational Technical Tuition Grant while taking prerequisite courses.

Term 0 — Pre-Program Prerequisites		
BIO-168	Human Anatomy and Physiology I	4
BIO-173	Human Anatomy and Physiology II ►	4
ENG-105	Composition I ►	3
HSC-108	Introduction to Health Professions	2
PSY-111	Introduction to Psychology	3
	Total Credits	**16**

Term 1 — Spring		
HSC-113	Medical Terminology	2
MAT-110	Math for Liberal Arts ►	3
OTA-101	Introduction to OT	3
OTA-120	Neuroanatomy for the OTA ►	3
SPC-101	Fundamentals of Oral Communication	3
	Total Credits	**14**

OTA Professional Courses

Term 2 — Summer

OTA-102	Human Movement and Occupation ► *		3
OTA-103	Task Analysis ► *		3
OTA-105	OTA and Professional Issues I ►		2
		Total Credits	**8**

* OTA-102 and OTA-103 are hybrid classes. Lectures are online and labs are on campus.

Term 3 — Fall

OTA-201	Pediatrics and Occupation ►	8WK1	3
OTA-202	Pediatric OTA Skills ►	8WK1	3
OTA-204	Pediatric Psychosocial Conditions and Occupations ►	8WK1	1
OTA-221	Level I Fieldwork Pediatrics ►	8WK1	1
OTA-222	OTA and Professional Issues II ►	8WK1	1
OTA-311	Adult Psychosocial Conditions and Occupations ►	8WK2	2
OTA-312	Adult Psychosocial OTA Skills ►	8WK2	2
OTA-313	Level I Fieldwork Psychosocial ►	8WK2	1
OTA-314	Management and the OTA ►	8WK2	3
		Total Credits	**17**

Term 4 — Spring

OTA-315	Adult Physical Conditions and Occupations ►	8WK1	2
OTA-316	Physical OTA Skills ►	8WK1	2
OTA-401	Elders and Occupation ►	8WK1	2
OTA-402	OTA Skills for Elders ►	8WK1	2
OTA-403	Level I Fieldwork Physical Dysfunction ►	8WK1	1
OTA-502	Level II Fieldwork A ►	8WK2	5
		Total Credits	**14**

Term 5 — Summer

OTA-503	Level II Fieldwork B ►		5
OTA-504	Student to Clinician ►		1
		Total Credits	**6**

Physical Therapist Assistant

The physical therapist assistant teams with physical therapists to help people live active and healthy lives. They help people rehabilitate from devastating injuries, manage chronic conditions, and oftentimes avoid surgery and use of prescription drugs. The physical therapist assistant will help improve patients' mobility and lessen physical disabilities.

The Physical Therapist Assistant program prepares you with the entry-level skills and knowledge to provide rehabilitative patient care to people of all ages and abilities in a variety of healthcare settings.

The physical therapist assistant student will learn:

- Physical therapy interventions including monitoring and adjustment based on real clinical educational experiences and simulated patient scenarios.
- Data collection by way of patient treatment interventions and objective assessment techniques.
- How to instruct patients in exercise and therapeutic modalities to improve pain and functional mobility.
- How to effectively educate and communicate with patients, families, and other healthcare providers.
- Value life-long professional development through learning opportunities and skill and knowledge advancement.

The physical therapist assistant can have a profound effect on people's lives.

Hands-On Learning Opportunities

Physical Therapist Assistant students gain hands-on experience, replicating all clinical settings, through daily patient scenario simulations. Students participate in discipline specific and interdisciplinary collaborations while in the health sciences simulation lab. Throughout the program, students obtain a total of 640 clinical education hours, under the supervision of a clinical instructor who helps provide work-world experience.

Is Physical Therapist Assistant the Career Path for Me?

If you can answer yes to the questions below, a career as a physical therapist assistant may be a good fit for you.

- Do you enjoy helping people achieve a better quality of life?
- Do you enjoy working as part of a team toward a common goal?
- Do you have a compassionate and caring personality?
- Can you:
    - Sit, bend, reach, and/or walk and stand for most of the day?
    - Lift and carry up to 35% of your own body weight?
    - Communicate effectively in written and verbal forms?
    - Place the needs of a patient above your own?
    - Use your vision and touch for patient assessment?
    - Use your fine and gross motor skills to assist a patient?

Certification and Licensure

Successful completion of the Physical Therapist Assistant program qualifies the graduate to take the National Physical Therapy Assistant Examination (NPTAE) and also to apply for state licensure. The NPTAE is a national exam; therefore, a graduate may seek employment in a state of their choice after successfully passing the exam and passing a state background check. Most states require a background check of the graduate prior to issuance of the state license.

Accreditation

The Physical Therapist Assistant program at Hawkeye Community 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; website: www.capteonline.org.

Program Statistics

Graduation Rates

Year of Graduation	Graduation Rate *
2021	75%
2020	93.3%
2019	90%
2018	94.7%
2017	85%

* Expected graduation rate

Licensure Pass Rates

Year of Graduation	Total Number of Graduates	Number of Graduates Taking Licensure Exam	Total Passing on 1st Attempt	Total Passing on Subsequent Attempts	Ultimate Pass Rate
2021	12	10	5	7 **	70%
2020	14	14	13	13	92.8%
2019	18	17	9	14 *	77.7%
2018	18	18	13	15	83.3%
2017	19	19	18	19	100%

* For 2019, three students have not reattempted taking the exam and one student has not initially attempted.

** For 2021, two students from this cohort have not yet attempted taking the exam. Data will be updated when results are known.

Employment Rates

Employment is reported within six months of licensure and/or one year after graduation.

Year of Graduation	Number of Graduates Seeking Employment	Number of Graduates Employed	Number of Graduates Pursuing Further College Education	Percentage Employed
2021	12	TBD	TBD	TBD
2020	13	13	2	100%
2019	18	13	0	72%
2018	14	14	2	100%
2017	18	18	1	100%

Careers

Physical therapist assistants work in a wide variety of settings including hospitals, outpatient clinics, inpatient rehabilitation facilities, pediatric settings, home health settings, skilled rehab and residential care facilities.

Example Careers and Average Wages

	Entry	Average	Experienced
Physical Therapist Assistants	$41,500	$53,700	$59,800

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Also see Salary.com PTA Salary in Iowa, www.salary.com/research/salary/alternate/pta-salary/ia, for additional wage information.

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Athletico	Locations throughout Iowa
MercyOne	Waterloo, IA
Millennium Therapy	Locations throughout Iowa
Northern Iowa Therapy	Locations throughout Iowa
Reliant Rehabilitation	Locations throughout Iowa
UnityPoint Health	Waterloo, IA

Program Admission

In order to be considered for the Physical Therapist Assistant program, students must provide the Admissions office with the appropriate documentation showing completion of all requirements. Appropriate documentation consists of:

- Updated assessment scores. -AND/OR-
- A transcript or academic evaluation showing successful completion of course requirements (i.e. developmental coursework).

It is the student's responsibility to:

- Monitor his/her progress towards meeting admissions requirements,
- Notify the Admissions office when requirements have been met, and
- Provide the Admissions office evidence of meeting the requirements.

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Pre-Program

Minimum Entrance Requirements

In order to be eligible for the Physical Therapist Assistant program, all students must:

1. Meet minimum entrance requirement scores and/or complete any required success coursework.

2. Have a minimum of one semester of high school or college level physics class with a grade of "C" or higher. The physics course must be completed by the end of Term 0 to be considered for transition from pre-program to in-program status. If the pre-program student is registered for the Hawkeye Physics for Everyday Life course in the fall term and the course is cancelled for any reason, the student will be allowed to take their physics requirement during Term 1 — Spring.

Students who have placed into one or more success courses will be admitted to the Physical Therapist Assistant pre-program.

Demonstrate College Readiness

Students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA	Success Course
Math	85 Elementary Algebra	42 Algebra	19	259 Quantitative Reasoning, Algebra, and Statistics	2.80	MAT-063 Elementary Algebra
Reading	76	82	19	251	2.80	RDG-040 College Preparatory Reading III
Writing	82 Sentence Skills	65	19	253	2.80	ENG-061 College Preparatory Writing II

Pre-Program Coursework

Pre-program coursework may be completed at Hawkeye Community College or transferred in from an accredited educational institution.

BIO-168 must be completed with a grade of "B" or higher within the last ten years prior to starting the Physical Therapist Assistant Term 2 coursework.

While Hawkeye Community College does issue Pass/Fail grades for some courses, accreditation requirements of the Physical Therapist Assistant program will **not accept college or high school pass/fail grades for any admission criteria**.

Completion of pre-program coursework does not guarantee admission into the Physical Therapist Assistant program.

See the suggested sequence of study for pre-program coursework.

Please work with the pre-health advisor to assure understanding of academic expectations. The pre-program PTA student must maintain a 3.0 GPA with all pre-program prerequisite coursework to progress to In-program which occurs after Term 0.

Observation Hours

Pre-program Physical Therapist Assistant students must complete their observation hours by the end of Term 0.

A minimum of 16 observation hours are required: 8 observation hours in an inpatient setting and 8 observation hours in an outpatient setting.

All observation hours must be complete and submitted to the director of the Physical Therapist Assistant program by December 1. Please plan your observation hours well in advance of this deadline as a courtesy to the physical therapy companies in our communities.

Please see the Physical Therapist Assistant Pre-Admission Observation Hours form, www.hawkeyecollege.edu/webres/File/programs/pta-observation-hours.pdf, for more details.

STEP 3 Physical Therapist Assistant Program Acceptance and Advising

Students who have completed Term 0 coursework and all observation hours can register for Term 1 coursework with the assistance of the pre-health advisor or Academic/College Success Advisor.

After progression into Term 1, students will be advised by the Academic/College Success Advisor.

As the student transitions into Term 2, the program director and program faculty will provide academic advisement.

Physical Therapist Assistant In-Program Requirements

Physical Therapist Assistant program technical coursework, Terms 3–5, begins summer term and will take approximately 15 months to complete.

Terms 3–5 require students to be on campus or in an assigned clinical site on a full-time basis.

Prior to entering an assigned clinical site, the student must:

- Have a physical examination with updated immunizations recorded on the Hawkeye Community College form. The form and instructions will be provided to all eligible students during the in-program orientation.
- Pass a criminal background, sex offender, and adult/dependent abuse background checks. Instructions will be provided during program orientation. Failing a background check will result in dismissal from the program.
- Complete Mandatory Reporting, Workplace Safety training, and HIPAA training. This training is part of the HSC-108 Introduction to Healthcare Professions course.

  Basic Life Support CPR level is also required and can be obtained through the Hawkeye Community College Business and Community Services department.

  All of these opportunities can be coordinated through communication with the Physical Therapist Assistant program director.

Students must achieve a minimum grade of "C" or higher in all program coursework.

You may only fail one program course; failing more than one course will be grounds for dismissal from the program.

Clinical Experience Requirements

Clinical experiences are completed off-campus. Sites may be local, in-state, or out-of-state. You are responsible for transportation to and from clinicals, as well as any associated housing costs. You will not be allowed to select specific clinical sites, but may make requests for special needs or geographical locations.

The program has a dress code for both on-campus coursework and clinical education.

Physical Therapist Assistant AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	56
Program Start	Summer
Time to Complete	1½ years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▶	Course has a prerequisite and/or corequisite.
4WK2	Course meets the last 4 weeks of the term.
12WK1	Course meets the first 12 weeks of the term.

Pre-Program Coursework

A minimum of one semester of high school or college level physics class with a grade of “C” or higher must be completed by the end of Term 0 to be considered for transition from pre-program to in-program status.

BIO-168 must be completed with a grade of "B" or higher within the last ten years of starting the Physical Therapist Assistant program coursework unless waived by the program chair.

BIO-173 must be completed with a grade of "B" or higher.

Term 0 and Term 1 coursework must be completed with a grade of "C-" or higher with the exception of BIO-168 and BIO-173 which must be completed with a grade of "B" or higher.

A cumulative GPA of 3.0 or higher must be achieved for Term 0 and Term 1 coursework.

All pre-program coursework must be scheduled to be completed no later than the end of Term 1 — Spring prior to the program's summer start.

Also see Admissions Requirements for more information.

You are not eligible for the Iowa Vocational Technical Tuition Grant while taking prerequisite courses.

Term 0 — Prerequisites		
BIO-168	Human Anatomy and Physiology I	4
ENG-105	Composition I ►	3
HSC-108	Introduction to Health Professions *Must be completed by the end of Term 0*	2
PSY-111	Introduction to Psychology	3
SPC-101	Fundamentals of Oral Communication	3
	Total Credits	**15**

Term 1 — Spring		
BIO-173	Human Anatomy and Physiology II ►	4
HSC-113	Medical Terminology	2
MAT-110	Math for Liberal Arts ►	3
PSY-121	Developmental Psychology	3
	Total Credits	**12**

Technical Program Coursework

Term 2 — Summer *

PTA-310 PTA Clinical I ►	4WK2	1
PTA-120 Kinesiology ►		3
PTA-150 Pathophysiology ►		3
	Total Credits	**7**

* Term 2 — Summer requires students to be on campus two mornings per week.

Term 3 — Fall

PTA-350 PTA Clinical II ►	4WK2	2
PTA-111 PTA Fundamentals ►	12WK1	4
PTA-194 Therapeutic Agents I ►	12WK1	3
PTA-211 Musculoskeletal I ►	12WK1	3
PTA-231 Therapeutic Exercise for PTA ►	12WK1	3
	Total Credits	**15**

Term 4 — Spring

PTA-400 PTA Clinical III ►	4WK2	2
PTA-113 Fundamentals for PTA II ►	12WK1	3
PTA-195 Therapeutic Agents II ►	12WK1	3
PTA-212 Musculoskeletal II ►	12WK1	3
PTA-248 PTA Neurology ►	12WK1	4
	Total Credits	**15**

Term 5 — Summer

PTA-284 PTA Professional Issues ►	2
PTA-450 PTA Clinical IV ►	5
Total Credits	**7**

Respiratory Care

The Respiratory Care program prepares you to recognize and treat respiratory disorders in patients of all ages. You will be trained to work with newborn babies having a rough start at life, children with asthma and trauma, and adults with heart and lung complications. You will gain the knowledge and skills to perform:

- Patient assessments
- Breathing treatments
- Lung clearance techniques
- Airway care
- Breathing tube insertion
- Blood draws
- Ventilator management
- Medical record documentation
- Sleep studies
- Electrocardiograms
- Pulmonary function tests

Hands-On Learning Opportunities

- **Van Gerpen Patient Simulator Laboratory**: Train in the state-of-the-art simulation lab using realistic full-body manikins and simulators to replicate a range of hospital settings and patient scenarios in a controlled environment.

- **Clinical**: Gain 800 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Certification

Graduates are eligible to take the national examination for licensure, which is required to practice in any state. A social security number is required in order to take exams and apply for licensure.

You will earn certifications in Basic Life Support (BLS), Advanced Cardiac Life Support (ACLS), Pediatric Advanced Life Support (PALS), and Neonatal Resuscitation Program (NRP).

Accreditation

The Respiratory Care program, 200457, Associate of Applied Science, is accredited by the Commission on Accreditation for Respiratory Care (CoARC).

The Commission on Accreditation for Respiratory Care (CoARC) accredits respiratory therapy education programs in the United States. To achieve this end, it utilizes an 'outcomes based' process. Programmatic outcomes are performance indicators that reflect the extent to which the educational goals of the program are achieved and by which program effectiveness is documented.

Programmatic Outcomes Data: coarc.com/students/programmatic-outcomes-data

Academic Articulation Agreement with North Iowa Area Community College

Students may take Term 0 and Term 1 of Hawkeye's Respiratory Care program courses at North Iowa Area Community College (NIACC) in Mason City and transfer to Hawkeye for the remaining core courses.

Students will perform the majority of clinicals in the Mason City area, driving to Waterloo for class no more than two days per week.

Careers

Graduates find employment in a variety of settings including:

- Acute care hospitals
- Sub-acute and long-term care facilities
- Pulmonary function labs
- Sleep centers
- Home care

Example Careers and Average Wages

	Entry	Average	Experienced
Respiratory Therapists	$45,100	$56,300	$61,900

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Grandview Healthcare Center	Oelwein, IA
Harmony House Health Care Center	Waterloo, IA
Mayo Clinic	Rochester and Mankato, MN
Mercy Medical Centers	Locations throughout Iowa
MercyOne	Locations throughout Iowa
Midwest Sleep Services	Waterloo, IA
UnityPoint Health	Locations throughout Iowa
University of Iowa Hospitals and Clinics	Iowa City, IA

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Program Admission

In order to be considered for the Respiratory Care program, students must provide the Admissions office with the appropriate documentation showing completion of all requirements. Appropriate documentation consists of:

- Updated assessment scores and/or
- A transcript or degree audit showing successful completion of course requirements (i.e. developmental coursework).

It is the student's responsibility to:

- Monitor their progress towards meeting admissions requirements,
- Notify the Admissions office when requirements have been met, and
- Provide the Admissions office evidence of meeting the requirements.

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

Students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor. Success courses do not apply toward graduation or the AAS degree.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA	Success Course
Math	85 Elementary Algebra	42 Algebra	19	259 Quantitative Reasoning, Algebra, and Statistics	2.80	MAT-063: Elementary Algebra
Reading	76	82	19	251	2.80	RDG-040 College Prep Reading III
Writing	82 Sentence Skills	65	19	253	2.80	ENG-061: College Prep Writing II

Applicants can take the ACT assessment or the ACCUPLACER assessment at Hawkeye. Pre-registration is required.

STEP 3 Prerequisite Coursework

Students must complete all prerequisite coursework to fulfill program admission requirements. See Respiratory Care Courses for prerequisite coursework and grade and cumulative GPA requirements.

STEP 4 Program Admittance

The Respiratory Care program begins each spring and admits 20 students.

Applicants who meet all admission requirements will be admitted based on eligibility date (driven by when prerequisites are successfully completed).

If the number of eligible students exceeds the number of available seats, students will be admitted in the following order:

1. Date all prerequisite coursework was completed.

2. Eligibility date — determined by either:
    a. The date the student registered for their final prerequisite course at Hawkeye, or

    b. The date the Admissions office received transcripts showing completion of prerequisite courses at another accredited institution.

3. Grade Point Average — Determined by grades in prerequisite courses.

Admitted students must have a physical exam with immunization record on Hawkeye Community College form. Criminal background, sex offender, and adult/dependent abuse background checks are required as well. Students will also be required to complete CPR, First Aid, Mandatory Reporting, HIPPA, and OSHA Training prior to clinical coursework.

Respiratory Care AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	61
Program Start	Spring
Time to Complete	1½ years

As a student in a health program at Hawkeye Community College, and to participate in clinicals, you will be required to complete the following screenings: Criminal background check, sex offender registry, child abuse registry, and dependent adult registry. The outcome could possibly affect your opportunities to participate in the clinical setting.

You are not eligible for the Iowa Vocational Technical Tuition Grant while taking prerequisite courses.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

- ◆ General education course.
- ► Course has a prerequisite and/or corequisite.

Term 0 — Pre-Program Prerequisites *		
BIO-168	Human Anatomy and Physiology I	4
BIO-173	Human Anatomy and Physiology II ►	4
ENG-105	Composition I ►	3
PSY-111	Introduction to Psychology	3
SPC-101	Fundamentals of Oral Communication	3
	Total Credits	**17**

* All prerequisite courses must be completed with a grade of "C-" or higher.

* A minimum cumulative GPA of 2.50 is required in the prerequisite courses.

* Prerequisite coursework can be completed at Hawkeye Community College or at any accredited transfer institution.

Term 1 — Spring **			
BIO-186	Microbiology	4	
CHM-122	Introduction to General Chemistry ►	4	
HSC-108	Introduction to Health Professions	2	
HSC-113	Medical Terminology	2	
MAT-110	Math for Liberal Arts ► -OR-	3	◆
MAT-156	Statistics ►	3	◆
		Total Credits 15	

** A minimum cumulative GPA of 2.50 is required in Term 1 courses.

** Term 1 coursework can be completed at Hawkeye Community College or at any accredited transfer institution.

Term 2 — Summer		
RCP-100	Introduction to Respiratory Care	3
RCP-260	Airway Maintenance Procedures ►	4
		Total Credits 7

Term 3 — Fall		
RCP-315	Cardiopulmonary Therapeutics ►	4
RCP-350	Pulmonary Pathology ►	3
RCP-561	Introduction to Ventilator Support ►	3
RCP-600	Neonatal/Pediatric Respiratory Therapy ►	3
RCP-680	Clinical Respiratory Care ►	4
		Total Credits 17

Term 4 — Spring		
RCP-410	Cardio/Pulmonary Diagnostics ►	3
RCP-565	Intensive Respiratory Care ►	3
RCP-690	Clinical Intensive Care ►	8
RCP-875	Respiratory Care Applications ►	2
		Total Credits 16

Term 5 — Summer		
RCP-900	Clinical Preceptor ►	4
RCP-910	Respiratory Care RRT Review	2
		Total Credits 6

Career Area

INFORMATION TECHNOLOGY

Cybersecurity

Information Systems Management

Network Administration and Engineering

Web Programming and Development

Cybersecurity

The Cybersecurity program prepares students to plan, implement, and defend networks of all sizes. Cybersecurity professionals specialize in protecting networks for threats that can cause loss of money or time due to systems being unavailable. Hawkeye's dedicated data center for students provides all of the tools and equipment needed to learn security best practices in a hands-on environment.

The Cybersecurity program prepares you to design setup, and secure devices and networks. You will gain knowledge and skills in:

- Computer hardware
- Desktop and server operating systems
- Server configuration and administration
- Network security
- Secure VPN solutions
- Wireless network security and administration
- Server, host device, and network device hardening
- Programming and scripting
- Network attacks and countermeasures
- Project management

Hands-on Learning Experiences

- **Data Center:** Learn to build and maintain industry-standard networks, including how to secure the network, protect against hacking attacks, and how to recover from an attack. Gain experience with a variety of operating systems and implement strategies to maintain network uptime and data confidentiality and integrity.

- **Internship:** Gain 192 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Certifications

In the information technology industry certifications are a must. Hawkeye is recognized as a Cisco Regional Academy and a VMware IT Academy. You may receive the CompTIA A+ Net+ and Security+, Cisco Certified Network Associate (CCNA), Microsoft Technology Associate (MTA), and VMware certifications.

Transfer Information

An articulation agreement with the University of Northern Iowa allows you to transfer your Cybersecurity coursework to UNI's Technology Management program.

Our transfer agreement with Upper Iowa University allows you to transfer your Cybersecurity coursework to Upper Iowa University's Bachelor of Science in Information Technology program.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Our graduates can be employed in many careers, including:

- Information Security Analyst
- Computer Network Support Specialist
- Network and Computer Systems Administrator
- Computer and Information Systems Manager

Example Careers and Average Wages

Occupation	Growth *	Entry	Average	Experienced
Computer and Information Systems Manager	12%	$83,500	$123,600	$143,600
Computer Network Support Specialist	12%	$39,300	$55,800	$64,000
Computer User Support Specialists	14.4%	$35,500	$50,600	$58,100
Information Security Analyst	34%	$58,700	$87,100	$101,300
Network and Computer Systems Administrator	8%	$53,600	$76,700	$88,200

Source: 2021 Iowa Wage Report, Iowa Workforce Development

** Source: 2019 Economic Development and Employer Planning System*

Employers

Many business sectors have a growing need for Security professionals including:

- IT Managed Services Providers
- Banking, Credit and Finance
- Healthcare and Medical
- Energy and Utilities
- Government
- Manufacturing
- Education
- Retail and Food Service

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Cybersecurity program, you must have a high school GPA of 2.50, or meet minimum score requirements listed below, and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor. Success course credits do not apply towards graduation or the AAS degree.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	63 Arithmetic	39 Pre-Algebra	16	255 Arithmetic 246 Quantitative Reasoning, Algebra, and Statistics	2.50
Reading	58	69	16	239	2.50
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Cybersecurity AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	70
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1 — Fall				
CIS-303	Introduction to Database		3	
CSC-116	Information Computing ► -OR-		3	▣
BCA-205	Database/Spreadsheets ► -OR-		3	▣
CSC-110	Introduction to Computers ►	O E	3	◆
MAT-110	Math for Liberal Arts ► -OR-		3	◆
MAT-102	Intermediate Algebra -OR-		4	◆
MAT-121	College Algebra ► -OR-		4	◆
MAT-128	Precalculus ► -OR-		4	◆
MAT-134	Trigonometry and Analytic Geometry ► -OR-		3	◆
MAT-156	Statistics ► -OR-	O E	3	◆
MAT-210	Calculus I ►		4	◆
NET-109	A+ Certification Prep Course		4	
NET-115	College Experience		1	
NET-178	Intro to Cyber Security		3	
			Total Credits 17	

Term 2 — Spring				
NET-202	Programming for Network Administrators ►		3	
NET-213	Cisco Networking ►		4	
NET-313	Windows Server ►		3	
NET-412	Linux System Administration		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**16**	

Term 3 — Summer			
NET-228	Cisco Networking II ►	4	
SPC-101	Fundamentals of Oral Communication	3	
		Total Credits	**7**

Term 4 — Fall				
BUS-180	Business Ethics -OR-	O E	3	◆
PHI-105	Introduction to Ethics	O E	3	◆
COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
NET-310	Virtual Machines ►		3	
NET-350	Cisco Security ►		4	
NET-612	Fundamentals of Network Security ►		3	
		Total Credits	**16**	

Term 5 — Spring			
CIS-750	Project Management ►	3	
NET-619	Network Attacks: Detection, Analysis & Countermeasures ►	3	
NET-916	Experiential Learning ►	5	
NET-932	Internship ►	3	
		Total Credits	**14**

Cybersecurity Certificate Courses

Award	Certificate
Credits	16
Program Start	Fall
Time to Complete	9 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1 — Fall			
NET-178	Intro to Cyber Security		3
NET-612	Fundamentals of Network Security ►		3
NET-619	Network Attacks: Detection, Analysis & Countermeasures ►		3
		Total Credits	**9**

Term 2 — Spring				
BUS-180	Business Ethics -OR-	O E	3	◆
PHI-105	Introduction to Ethics	O E	3	◆
NET-350	Cisco Security ►		4	
		Total Credits	**7**	

Information Systems Management

Learn to implement and manage the systems that support a business's key objectives, goals, and business practices—combining your computer and business skills.

The Information Systems Management program prepares students to work as Computer User Support Specialists in a tier-2 capacity, which involves directly working with clients to resolve more complex issues that are unable to be resolved by Help-Desk.

Students will learn:

- Basic PC hardware and operating systems
- Microsoft Office and databases
- Server operating systems
- Computer networking

Students will also be introduced to business concepts such as accounting, stats, business management, HR management, project managements, and have an internship to gain valuable real-world experience prior to graduation.

Certifications

In the information technology industry certifications are a must. Hawkeye is recognized as a Cisco Regional Academy. You may receive the Cisco Certified Entry Networking Technician (CCENT), and CompTIA certifications.

Why Pursue a Career in Information Technology?

Information Technology (IT) is something that every company needs in order to compete in the world today. Since every company needs IT, you have a huge number of employers and industries to choose from. As someone who can implement and maintain IT infrastructures as well as help other employees with IT-related problems, an IT professional is a vital asset to any company. But IT is only part of the overall picture; business is the other part.

The Information Systems Management program introduces students to general IT concepts as well as business related practices. By having a combination of the two, graduates not only understand IT, but also how IT relates to business.

Transfer Information

An articulation agreement allows you to transfer your Information Systems Management coursework to the Technology Management program at the University of Northern Iowa.

Our transfer agreement with Upper Iowa University allows you to transfer your Information Systems Management coursework to Upper Iowa University's Bachelor of Science in Information Technology program.

Hawkeye also has a transfer relationship with the University of Iowa.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Our graduates can be employed in many career areas, including:

- Support specialist
- Account representative
- Help desk technician
- Computer repair technician
- Network manager
- Help desk manager
- Information systems manager

Example Careers and Average Wages

	Entry	Average	Experienced
Computer User Support Specialists	$34,000	$50,500	$58,700

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Industry Growth

State, National, and Regional indicators for related careers for this program show large growth in opportunities of 6–32% with steadily increasing median annual wages of $47K statewide to $52K nationally.

Supply indicators show a large shortage of trained workers for IT positions.

Sources:

- *Economic Development and Employer Planning System*
- *U.S. Bureau of Labor Statistics*

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
CBE Group	Cedar Falls, IA
Cedar Valley Medical Specialists, P.C.	Waterloo, IA
The VGM Group	Waterloo, IA
Veridian Credit Union	Waterloo, IA
Waverly Utilities	Waverly, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Information Systems Management program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	63 Arithmetic	39 Pre-Algebra	16	255 Arithmetic 246 Quantitative Reasoning, Algebra, and Statistics	2.50
Reading	58	69	16	239	2.50
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Information Systems Management AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	63
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1

CIS-303	Introduction to Database		3	
CSC-116	Information Computing ► -OR-		3	
BCA-205	Database/Spreadsheets ► -OR-		3	
CSC-110	Introduction to Computers ►	O E	3	◆
MAT-110	Math for Liberal Arts ► -OR-		3	◆
MAT-102	Intermediate Algebra -OR-		4	◆
MAT-121	College Algebra ► -OR-		4	◆
MAT-128	Precalculus ► -OR-		4	◆
MAT-134	Trigonometry and Analytic Geometry ► -OR-		3	◆
MAT-210	Calculus I ►		4	◆
NET-109	A+ Certification Prep Course		4	
NET-115	College Experience		1	
NET-213	Cisco Networking ►		4	
		Total Credits	**18**	

Term 2

BUS-102	Introduction to Business		3	
COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
NET-228	Cisco Networking II ►		4	
NET-313	Windows Server ►		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**16**	

Term 3

ACC-131	Principles of Accounting I ►		4
MAT-156	Statistics ►		3
MGT-101	Principles of Management		3
SPC-101	Fundamentals of Oral Communication		3
		Total Credits	**13**

Term 4

ACC-132	Principles of Accounting II ►		4
CIS-750	Project Management ►		3
MGT-170	Human Resource Management		3
NET-932	Internship ►		3
	Information Technology Elective		3
		Total Credits	**16**

Information Technology Electives		
BUS-183	Business Law	3
NET-152	Advanced Network Technology	3
NET-229	Cisco Networking III ►	4
NET-310	Virtual Machines ►	3
NET-346	Windows Exchange Server ►	3
NET-412	Linux System Administration	3
NET-474	Certification Preparation ►	1
NET-475	Certification Preparation ►	2
NET-612	Fundamentals of Network Security ►	3
NET-949	Special Topics	1

Network Administration and Engineering

Learn to design, layout, setup, and maintain every aspect of a computer network. You'll train in Hawkeye's state-of-the-art data center, where you learn to build a network, secure the network, and restore the network after an outage.

The Network Administration and Engineering program prepares students to work as Systems Administrators in a tier-3 capacity, which involves directly working with clients to resolve more complex issues that are unable to be resolved by tier-1 (Help desk) and tier-2 (PC / User support) personnel. In addition, program graduates are also prepared to manage IT infrastructures for area business and do so on-site or remotely.

Students will learn:

- Basic PC hardware and operating systems
- Microsoft Office
- Databases
- Server operating systems
- Computer networking.
- Advanced IT technologies including virtualization, email systems, server management, project management, SQL, IT security, and more!

Students will also complete an internship to gain valuable work experience prior to graduation.

Hands-on Learning Experiences

- **Data Center:** Learn to build and maintain industry-standard networks, including how to secure the network, protect against hacking attacks, and how to recover from an attack. Gain experience with the latest Microsoft desktop, server, Exchange, and SQL server platforms.

- **Internship:** Gain 192 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Certifications

In the information technology industry certifications are a must. Hawkeye is recognized as a Cisco Regional Academy and a VMware IT Academy. You may receive the Cisco Certified Network Associate (CCNA), CompTIA, and VMware certifications.

Why Pursue a Career in Information Technology?

Information Technology (IT) is something that every company needs in order to compete in the world today. This program has a tremendous reputation with employers around the state for preparing students very well to enter the IT workforce. Placement in the IT field averages 85% within 90 days for new graduates seeking work.

Transfer Information

This program is geared towards students wishing to complete two years of education and enter the workforce. For students wishing to continue education, this program has articulation agreements with Upper Iowa University as well as a transfer relationship with the University of Iowa

An articulation agreement with the University of Northern Iowa allows you to transfer your Network Administration and Engineering coursework to UNI's Technology Management program.

Our transfer agreement with Upper Iowa University allows you to transfer your Network Administration and Engineering coursework to Upper Iowa University's Bachelor of Science in Information Technology program.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Our graduates can be employed in many careers, including:

- Network administrator
- Network technician
- LAN/WAN engineer
- LAN/WAN administrator
- Help desk technician

Example Careers and Average Wages

	Entry	Average	Experienced
Computer Network Support Specialists	$42,700	$59,300	$67,600
Computer User Support Specialists	$34,100	$50,500	$58,700

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Industry Growth

State, National, and Regional indicators for related careers for this program show large growth in opportunities of 6–32% with steadily increasing median annual wages of $47K statewide to $52K – $65K nationally.

Supply indicators show a large shortage of trained workers for IT positions.

Sources:

- *Economic Development and Employer Planning System*
- *U.S. Bureau of Labor Statistics*

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
ACES	Cedar Falls, IA
BerganKDV	Waterloo, IA
CBE Group	Cedar Falls, IA
CDW	Minneapolis, MN
Cedar Falls Utilities	Cedar Falls, IA
John Deere	Waterloo, IA
EO Johnson Business Technologies	Cedar Falls, IA
The VGM Group	Waterloo, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Network Administration and Engineering, all students must meet minimum score requirements and/or complete required success courses. Success course credits do not apply towards graduation or the AAS degree.

In order to be eligible for the Network Administration and Engineering program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	63 Arithmetic	39 Pre-Algebra	16	255 Arithmetic 246 Quantitative Reasoning, Algebra, and Statistics	2.50
Reading	58	69	16	239	2.50
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Network Administration and Engineering AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	68
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1 — Fall				
CIS-303	Introduction to Database		3	
CSC-116	Information Computing ► -OR-		3	▣
BCA-205	Database/Spreadsheets ► -OR-		3	▣
CSC-110	Introduction to Computers ►	O E	3	◆
MAT-110	Math for Liberal Arts ► -OR-		3	◆
MAT-102	Intermediate Algebra -OR-		4	◆
MAT-121	College Algebra ► -OR-		4	◆
MAT-128	Precalculus ► -OR-		4	◆
MAT-134	Trigonometry and Analytic Geometry ► -OR-		3	◆
MAT-156	Statistics ► -OR-	O E	3	◆
MAT-210	Calculus I ►		4	◆
NET-109	A+ Certification Prep Course		4	
NET-115	College Experience		1	
NET-213	Cisco Networking ►		4	
			Total Credits 18	

Term 2 — Spring				
COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
NET-228	Cisco Networking II ►		4	
NET-313	Windows Server ►		3	
NET-412	Linux System Administration		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
			Total Credits 16	

Term 3 — Fall		
NET-168	Administering Windows Server ►	3
NET-229	Cisco Networking III ►	4
NET-310	Virtual Machines ►	3
NET-346	Windows Exchange Server ►	3
NET-612	Fundamentals of Network Security ►	3
	Total Credits 16	

Term 4 — Spring		
CIS-750	Project Management ►	3
NET-710	SQL Database ►	2
NET-916	Experiential Learning ►	5
NET-932	Internship ►	3
SPC-101	Fundamentals of Oral Communication	3
	Electives *	2
	Total Credits 18	

* Must take a minimum of 2 credits from this elective list.

Electives *		
CIS-604	Visual Basic	3
NET-152	Advanced Network Technology	3
NET-474	Certification Preparation ►	1
NET-475	Certification Preparation ►	2
NET-949	Special Topics	1

* Must take a minimum of 2 credits from the elective list.

Computer Networking Technician Diploma Courses

Award	Diploma
Credits	34
Program Start	Fall
Time to Complete	9 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1 — Fall				
CIS-303	Introduction to Database		3	
CSC-116	Information Computing ► -OR-		3	▣
BCA-205	Database/Spreadsheets ► -OR-		3	▣
CSC-110	Introduction to Computers ►	O E	3	◆
MAT-110	Math for Liberal Arts ► -OR-		3	◆
MAT-102	Intermediate Algebra -OR-		4	◆
MAT-121	College Algebra ► -OR-		4	◆
MAT-128	Precalculus ► -OR-		4	◆
MAT-134	Trigonometry and Analytic Geometry ► -OR-		3	◆
MAT-156	Statistics ► -OR-	O E	3	◆
MAT-210	Calculus I ►		4	◆
NET-109	A+ Certification Prep Course		4	
NET-115	College Experience		1	
NET-213	Cisco Networking ►		4	
			Total Credits 18	

Term 2 — Spring				
COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
NET-228	Cisco Networking II ►		4	
NET-313	Windows Server ►		3	
NET-412	Linux System Administration		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
			Total Credits 16	

Web Programming and Development

Gain the knowledge and skills to plan, program, and test dynamic web applications. You'll learn programming languages that are standard in the industry. From the start, you'll develop your skills building basic websites and progressing to dynamic database-driven web applications.

The Web Programming and Development program prepares you with the knowledge and skills to plan, create, program, test, troubleshoot, and maintain dynamic web applications. You will learn multiple programming languages, including HTML5, CSS3, PHP, ASP.NET C#, SQL, and JavaScript. You will also gain skills in:

- Programming logic
- Database design and management
- Website standards
- Responsive, mobile, and desktop website layouts
- Web application building
- Programming algorithms

Programming is a high-demand area. This career is a highly creative career path for problem solvers.

Hands-On Learning Opportunities

- **Computer Lab:** Practice your coding and programming skills with the latest in industry software.
- **Internship:** Gain 192 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.
- **Projects:** Many courses have projects to showcase learning.

Transfer Information

An articulation agreement allows you to transfer your Web Programming and Development coursework to the Technology Management program at the University of Northern Iowa.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates find employment in all types of businesses including:

- Advertising
- Manufacturing
- Service
- Education
- Distributors
- Retail
- Tourism
- Non-profit
- Government agencies

Example Careers and Average Wages

	Entry	Average	Experienced
Web Developers and Digital Interface Designers	$38,800	$65,700	$79,100

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Far Reach Technologies	Cedar Falls, IA
Hawkeye Community College	Waterloo, IA
Mudd Advertising	Waterloo, IA
VGM Forbin	Waterloo, IA
Scientific Games Interactive/Williams Interactive SoCaMo	Cedar Falls, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Web Programming and Development program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	63 Arithmetic	39 Pre-Algebra	16	255 Arithmetic 246 Quantitative Reasoning, Algebra, and Statistics	2.50
Reading	76	82	19	251	2.80
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Web Programming and Development AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	61
Program Start	Fall
Time to Complete	2 years
Course Format	Hybrid, Online
Class Meets	Evening starting at 5:00pm

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

- ◆ General education course.
- ▣ Non-transfer general education course.
- ► Course has a prerequisite and/or corequisite.

Term 1			
CIS-121	Introduction to Programming Logic	3	
CIS-355	Database Design and Management	4	
COM-781	Written Communication in the Workplace ► -OR-	3	◆
ENG-105	Composition I ►	3	◆
MAT-110	Math for Liberal Arts ► -OR-	3	
	Math Elective	3	
WDV-102	Introduction to Web Development	3	
		Total Credits 16	

Term 2

CIS-215	Server Side Web Programming ►	3	
CIS-231	PHP Programming ►	3	
CIS-249	Web Languages ► -OR-	3	
MGT-110	Small Business Management -OR-	3	
WDV-105	Web Layouts -OR-	3	
WDV-928	Independent Study	1	
CIS-504	Structured Systems Analysis	3	
SPC-101	Fundamentals of Oral Communication	3	
		Total Credits 15	

Term 3

CIS-206	Web Scripting ►	3	
CIS-217	Data Driven Web Page ►	3	
CIS-225	Advanced Server Side Web Programming ►	3	
PSY-102	Human and Work Relations -OR-	3	◆
PSY-111	Introduction to Psychology -OR-	3	◆
SOC-110	Introduction to Sociology	3	◆
	Elective	3	
		Total Credits 15	

Term 4

CIS-184	Programming Algorithms ►	3	
WDV-600	Project Development ►	3	
WDV-800	Portfolio ►	3	
WDV-930	Internship ►	3	
	Elective	3	
		Total Credits 15	

Electives

CIS-234	Web Site Administration ►	3
CIS-249	Web Languages ►	3
CIS-274	E-Commerce Design ►	3
CIS-364	Game Development I ►	3
MGT-110	Small Business Management *Offered spring semester*	3
NET-109	A+ Certification Prep Course *Offered fall semester*	4
WDV-105	Web Layouts	3
WDV-300	Advanced Topics in Web Development ►	3
WDV-928	Independent Study	1

Math Electives

MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Career Area

MANUFACTURING AND ENGINEERING

Civil & Construction Engineering Technology

CNC Machining & Tool-Making Technology

Electronics Engineering Technology

Industrial Automation Technology

Welding, Advanced Manufacturing Welding

Civil and Construction Engineering Technology

The Civil and Construction Engineering Technology program prepares you for an entry-level career working as a technician under the direction of civil engineers, surveyors, contractors, and architects. If you'd like a job building bridges, highways, or facilities, this degree is for you. You'll learn how to use the latest technology in the areas of planning, designing, construction, and maintenance, while positioning yourself to earn a great salary. You'll learn to:

- Read building and highway blueprints
- Operate survey equipment and process data
- Sample and test materials
- Prepare construction plans
- Prepare quantity estimates
- Inspect civil infrastructure projects
- Use computer-aided drafting and design (CADD)

Hands-On Learning Opportunities

- **Indoor and Outdoor Lab and Field Work Experiences:** Use technology, tools, and equipment in real-world projects, including surveying, construction materials testing, engineering problem solving, and CAD.

- **Job Opportunities:** Many summer and part-time jobs are available while you are completing the program. These are not a requirement to graduate.

Transfer Information

An articulation agreement allows you to transfer some of your Civil and Construction Engineering Technology coursework to the Construction Management program and Technology Management program at the University of Northern Iowa. Additional transfer options may be available.

If you plan to transfer, work closely with a program advisor to ensure that courses transfer and program requirements are met.

Careers

Graduates find employment working as civil technicians, CAD drafters, designers, surveyors, construction inspectors, material testing technicians, and estimators for engineering offices, material testing labs, surveying companies, civil construction contractors, city engineer offices, and county and state highway departments.

Example Careers and Average Wages

	Entry	Average	Experienced
Civil Engineering Technicians	$38,600	$58,200	$68,100

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
AECOM	Waterloo and Des Moines, IA
Black Hawk County Engineer's Office	Waterloo, IA
CGA Consultants	Cedar Falls, Marshalltown, and Ackley, IA
City of Waterloo Engineering Department	Waterloo, IA
Fehr Graham Engineering and Environmental	Manchester and West Union, IA
Foth	Cedar Rapids and Des Moines, IA
Herold-Reicks Surveying	New Hampton, Waverly, and Clear Lake, IA
Iowa Department of Transportation	Ames, IA
McAninch Corporation	Des Moines, IA
WHKS, Inc.	Dubuque and Ames, IA
Peterson Contractors, Inc.	Reinbeck, IA
Terracon	Cedar Falls and Cedar Rapids, IA
WHKS Engineers and Land Surveyors	Mason City and Dubuque, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Civil and Construction Engineering program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	85 Elementary Algebra	42 Algebra	19	259 Quantitative Reasoning, Algebra, and Statistics	2.80
Reading	58	69	16	239	2.50

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Civil and Construction Engineering Technology AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	72
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.

Term 1			
CAD-118	Technical Drawing and CAD ►	3	
CET-123	Constr Drawings and Cont ►	3	
CET-160	Surveying ►	3	
CSC-110	Introduction to Computers ►	3	
EGT-416	Civil Engineering and Architecture	3	
MAT-741	Technical Mathematics I ► * -OR-	3	◆
MAT-121	College Algebra ►	4	◆
		Total Credits 18	

* Completion of MAT-128 with a minimum grade of C will satisfy the MAT-741 and MAT-748 course requirement.

Term 2

CET-142	PC Concrete, HMA, and Testing		3	
CET-183	Structural Detailing and Civil Drafting ►		3	
CET-213	Route Surveying/Roadway Design ►		3	
CET-253	Fundamentals of Construction Estimating ►		3	
COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
MAT-748	Technical Math II ► * -OR-		3	◆
MAT-134	Trigonometry and Analytic Geometry ►		3	◆
		Total Credits	**18**	

* Completion of MAT-128 with a minimum grade of C will satisfy the MAT-741 and MAT-748 course requirement.

Term 3

CET-223	Soils, Testing, and Foundations ►		3	
CET-233	Fundamentals of GPS and GIS ►		3	
CON-266	Construction Safety		3	
EGT-243	Statics and Strength of Materials ►		3	
PHY-183	Applied Physics ► -OR-		3	◆
PHY-162	College Physics I ►		4	◆
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**18**	

Term 4

CET-133	Construction Methods and Resources ►		3
CET-256	Land Surveying ►		3
CET-262	Environmental Technology ►		3
CET-285	Structural Steel/Reinforced Concrete Design ►		3
CET-296	Site Planning and Development ►		3
SPC-101	Fundamentals of Oral Communication		3
		Total Credits	**18**

CNC Machining and Tool-Making Technology

The CNC Machining and Tool-Making Technology program prepares you for a variety of CNC careers.

During your first year, you will gain basic machining knowledge and skills using manual and CNC machines, computer-aided drafting (CAD) and computer-aided machining (CAM) programming, lathes, mills, and electrical-discharge machines (EDMs). After completing your first year, you can earn a diploma in CNC Machining Technology, a certificate as a CNC Machine Operator, or a certificate as a CNC Machine Set-Up Specialist.

During your second year, gain hands-on experience in tool-making, die building, mold making, jig and fixture building, tool room machining, and basic design skills. You are also introduced to manual and coordinate measuring machine (CMM) inspection. You will earn an Associate of Applied Science degree.

Hands-On Learning Opportunities

- **CNC Lab:** Use the latest equipment in the industry as you learn and perfect your skills on various type of CNC and production manufacturing machines.
- **Virtual CNC:** Practice and gain confidence in your programming skills of CNC machines, mills, and lathes of the most widely used brands.

Transfer Information

An articulation agreement allows you to transfer your CNC Machining and Tool-Making Technology coursework to the Manufacturing Technology and Technology Management programs at the University of Northern Iowa.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates find employment working in a variety of positions including:

- Tool and die maker
- CNC machinist
- CNC machine operator
- CNC set-up specialist

Example Careers and Average Wages

	Entry	Average	Experienced
Computer Numerically Controlled Machine Tool Operators	$31,600	$41,500	$46,500
Computer Numerically Controlled Machine Tool Programmers	$39,300	$52,300	$58,800
Machinists	$32,300	$42,700	$48,000
Tool and Die Makers	$41,400	$52,700	$58,300

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Many graduates in this field work overtime. Overtime wages are not included in the above average wages.

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Accurate Gear and Machine, Inc.	Waterloo, IA
Blackhawk Engineering, Inc.	Cedar Falls, IA
Criterion Manufacturing	Waterloo, IA
Geater Machining & Manufacturing, Co.	Independence, IA
GMT Corporation	Waverly, IA
Iowa Laser Technology	Cedar Falls, IA
John Deere	Waterloo, IA
Viking Pump, Inc.	Cedar Falls, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the CNC Machining and Tool-Making Technology program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	40 Arithmetic	24 Pre-Algebra	14	240 Arithmetic 241 Quantitative Reasoning, Algebra, and Statistics	2.00
Reading	58	69	16	239	2.50
Writing	42 Sentence Skills	20	13	229	1.00

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

CNC Machining and Tool-Making Technology AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	80
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1			
MFG-157	Introduction to CNC Programming I	8WK1	2
MFG-158	Introduction to CNC Programming II ►	8WK2	2
MAT-772	Applied Math -OR-		3
	Math Elective		3
MFG-122	Machine Trade Printreading I		3
MFG-211	Basic Machine Theory		2
MFG-222	Machine Operations I ►		4
MFG-302	CNC Fundamentals		3
		Total Credits	**19**

Term 2

COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
MFG-142	Geometric Dimensioning Tolerancing ►		3	
MFG-214	Advanced Machine Theory		2	
MFG-228	Machine Operations II		4	
MFG-309	CNC Programming Theory II ►		4	
MFG-335	CNC Operations ►		3	
	Total Credits		**19**	

Term 3 — Summer

MFG-320	Computer Aided Machining		3
MFG-364	Hydraulic Jigs and Fixtures ►		4
MFG-380	EDM Fundamentals		2
	Total Credits		**9**

Term 4

MFG-408	Basic Diemaking ►		8
MFG-410	CAD Die Design		3
SPC-101	Fundamentals of Oral Communication		3
WEL-402	Tool Steel Welding and Heat Treatment		2
	Total Credits		**16**

Term 5

MFG-107	Introduction to 3D Modeling		3	
MFG-431	Die Revision and Repair ►		5	
MFG-452	Moldmaking ►		3	
MFG-525	CMM Inspection and SPC ►		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
	Total Credits		**17**	

Math Electives	
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

CNC Machining Technology Diploma Courses

Award	Diploma
Credits	47
Program Start	Fall
Time to Complete	1 year

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1			
MFG-157	Introduction to CNC Programming I	8WK1	2
MFG-158	Introduction to CNC Programming II ▶	8WK2	2
MAT-772	Applied Math -OR-		3
	Math Elective		3
MFG-122	Machine Trade Printreading I		3
MFG-211	Basic Machine Theory		2
MFG-222	Machine Operations I ▶		4
MFG-302	CNC Fundamentals		3
		Total Credits	**19**

Term 2

COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
MFG-142	Geometric Dimensioning Tolerancing ►		3	
MFG-214	Advanced Machine Theory		2	
MFG-228	Machine Operations II		4	
MFG-309	CNC Programming Theory II ►		4	
MFG-335	CNC Operations ►		3	
		Total Credits	**19**	

Term 3 — Summer

MFG-320	Computer Aided Machining		3
MFG-364	Hydraulic Jigs and Fixtures ►		4
MFG-380	EDM Fundamentals		2
		Total Credits	**9**

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

CNC Machine Set-Up Specialist Certificate Courses

Award	Certificate
Credits	38
Program Start	Fall
Time to Complete	9 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1			
MFG-157	Introduction to CNC Programming I	8WK1	2
MFG-158	Introduction to CNC Programming II ▶	8WK2	2
MAT-772	Applied Math -OR- Math Elective		3
MFG-122	Machine Trade Printreading I		3
MFG-211	Basic Machine Theory		2
MFG-222	Machine Operations I ▶		4
MFG-302	CNC Fundamentals		3
		Total Credits	**19**

Term 2

COM-781	Written Communication in the Workplace ► -OR-	O E	3	◆
ENG-105	Composition I ►	O E	3	◆
MFG-142	Geometric Dimensioning Tolerancing ►		3	
MFG-214	Advanced Machine Theory		2	
MFG-228	Machine Operations II		4	
MFG-309	CNC Programming Theory II ►		4	
MFG-335	CNC Operations ►		3	
		Total Credits	**19**	

Math Electives

MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

CNC Machine Operator Certificate Courses

Award	Certificate
Credits	19
Program Start	Fall
Time to Complete	4 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1			
MFG-157	Introduction to CNC Programming I	8WK1	2
MFG-158	Introduction to CNC Programming II ▶	8WK2	2
MAT-772	Applied Math -OR-		3
	Math Elective		3
MFG-122	Machine Trade Printreading I		3
MFG-211	Basic Machine Theory		2
MFG-222	Machine Operations I ▶		4
MFG-302	CNC Fundamentals		3
		Total Credits	**19**

Math Electives	
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

Electronics Engineering Technology

The Electronics Engineering Technology program prepares you with the knowledge and skills needed to work with electronics engineers to design, develop, and manufacture industrial and consumer electronic equipment. You will learn how to operate, program, test, troubleshoot, and repair equipment such as industrial control systems, navigational equipment, two-way radios, wireless technologies, radar, and computer systems.

You will gain hands-on training with:

- Electrical schematic reading and drafting
- Electronic communications
- Electronics manufacturing
- Electronics maintenance
- Computer and business machine repair
- Electronics design and development
- In-depth computer programming with hardware interfacing
- Networking

Transfer Information

A formal articulation agreement allows you to transfer your Electronics Engineering Technology coursework to the Bachelor Electrical Engineering Technology program (BEET) or the Technology Management program at the University of Northern Iowa to earn a bachelor's degree.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates generally find employment at manufacturing, technology, and engineering companies. Positions include but are not limited to:

- Medical electronics technician
- Electronics communication technician
- Manufacturing test technician
- Engineering technician
- Computer repair technician
- Computer software technician
- Business machine service technician
- Computer network technician
- Industrial maintenance technician
- Quality assurance technicians

Example Careers and Average Wages

	Entry	Average	Experienced
Electrical and Electronics Engineering Technicians	$52,000	$71,000	$80,600
Electrical and Electronics Repairers for Commercial and Industrial Equipment	$50,600	$61,200	$66,500

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Collins Aerospace	Cedar Rapids, IA
ConAgra Foods, Inc.	Waterloo, IA
GARMIN	Olathe, KS
John Deere	Waterloo, IA
MercyOne	Waterloo, IA
Nestlé USA	Waverly, IA
Randstad Technologies	Cedar Rapids, IA
Skyworks Solutions, Inc.	Cedar Rapids, IA
Target Distribution Center	Cedar Falls, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions.

STEP 2 Basic Skill Competencies

In order to be eligible for the Electronics Engineering Technology program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a "C" grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	85 Elementary Algebra	42 Algebra	19	259 Quantitative Reasoning, Algebra, and Statistics	2.80
Reading	58	69	16	239	2.50
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants meeting the Basic Skill Competencies are eligible for acceptance.

Applicants not meeting the Basic Skill Competencies will be accepted to a pre-program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Electronics Engineering Technology AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	85
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1				
ELT-290	DC Electricity ►	8WK1	4	
ELT-291	AC Electricity ►	8WK2	4	
EGT-108	Principles of Engineering -OR-		3	
EGT-410	PLTW - Principles of Engineering		3	
IND-100	Basic Mechanical Systems		2	
IND-111	Industrial Safety Mechanical Systems		1	
MAT-504	Electronics Math I ► -OR-		4	◆
MAT-210	Calculus I ►		4	◆
		Total Credits	**18**	

Term 2

ELT-104	Electronics Drafting ► -OR-		3
CAD-118	Technical Drawing and CAD ►		3
ELT-321	Operational Amplifiers ►		3
ELT-322	Electronics Devices ►		4
ELT-600	Applied Computer Programming		3
MAT-514	Electronics Math II ►		4
SPC-101	Fundamentals of Oral Communication		3
		Total Credits	**20**

Term 3 — Summer

ELT-469	Digital Circuits and Systems ► -OR-		5	
EGT-420	PLTW - Digital Electronics		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**8**	

Term 4

ELT-403	Visual Basic ►		3
ELT-415	Communication Circuits I ►		5
ELT-417	Computer Systems ►		3
ELT-494	Data Acquisition Systems ►		5
ELT-802	Electronics Design Project I		1
PHY-183	Applied Physics ►		3
		Total Credits	**20**

Term 5

ELT-156	Industrial Electronics ►		5	
ELT-497	Communication Circuits II ►		6	
ELT-703	Introduction to Networking ►		2	
ELT-704	Embedded Processors ►		2	
ELT-803	Electronics Design Project II ►		1	
ENG-105	Composition I ► -OR-		3	▣
COM-781	Written Communication in the Workplace ►		3	▣
		Total Credits	**19**	

Electronics Technician Diploma Courses

Award	Diploma
Credits	46
Program Start	Fall
Time to Complete	1 year

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1				
ELT-290	DC Electricity ►	8WK1	4	
ELT-291	AC Electricity ►	8WK2	4	
EGT-108	Principles of Engineering -OR-		3	
EGT-410	PLTW - Principles of Engineering		3	
IND-100	Basic Mechanical Systems		2	
IND-111	Industrial Safety Mechanical Systems		1	
MAT-504	Electronics Math I ► -OR-		4	◆
MAT-210	Calculus I ►		4	◆
		Total Credits	**18**	

Term 2

ELT-104	Electronics Drafting ► -OR-		3
CAD-118	Technical Drawing and CAD ►		3
ELT-321	Operational Amplifiers ►		3
ELT-322	Electronics Devices ►		4
ELT-600	Applied Computer Programming		3
MAT-514	Electronics Math II ►		4
SPC-101	Fundamentals of Oral Communication		3
		Total Credits	**20**

Term 3 — Summer

ELT-469	Digital Circuits and Systems ► -OR-		5	
EGT-420	PLTW - Digital Electronics		3	
PSY-102	Human and Work Relations -OR-	O E	3	◆
PSY-111	Introduction to Psychology -OR-	O E	3	◆
SOC-110	Introduction to Sociology	O E	3	◆
		Total Credits	**8**	

Electronics Installer Certificate Courses

Award	Certificate
Credits	35
Program Start	Fall
Time to Complete	9 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1				
ELT-290	DC Electricity ►	8WK1	4	
ELT-291	AC Electricity ►	8WK2	4	
EGT-108	Principles of Engineering -OR-		3	
EGT-410	PLTW - Principles of Engineering		3	
IND-100	Basic Mechanical Systems		2	
IND-111	Industrial Safety Mechanical Systems		1	
MAT-504	Electronics Math I ► -OR-		4	◆
MAT-210	Calculus I ►		4	◆
		Total Credits	**18**	

Term 2		
ELT-104	Electronics Drafting ► -OR-	3
CAD-118	Technical Drawing and CAD ►	3
ELT-321	Operational Amplifiers ►	3
ELT-322	Electronics Devices ►	4
ELT-600	Applied Computer Programming	3
MAT-514	Electronics Math II ►	4
		Total Credits 17

Industrial Automation Technology

The Industrial Automation Technology program provides you the opportunity to develop skills and knowledge required in the manufacturing industry to install, program, maintain, repair, and troubleshoot high-tech, computerized machinery.

You will gain hands-on training with:

- Programmable logic controller (PLC) computers
- CNC machines
- Robotics
- Electronic components
- Mechanical systems
- Fluid power
- And much more

With in-depth knowledge of the manufacturing process and state-of-the-art equipment, you will be a problem solver working to keep production running. You will learn through hands-on training using the state-of-the-art technology used in the workplace. Technology brands include but is not limited to:

- Fanuc
- Allen Bradley
- Siemens
- Okuma
- Hardinge
- Rockwell

Transfer Information

An articulation agreement allows you to transfer your Industrial Automation Technology coursework to the Technology Management program at the University of Northern Iowa.

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Enhance Iowa Grant

The Industrial Automation Technology program is part of the Enhance Iowa project, a grant from the US Department of Labor for equipment, training, and simulation to help prepare individuals in the high demand field of industrial maintenance and automation.

Careers

Graduates generally work in industrial maintenance positions and find employment in manufacturing, food processing, and business environments. Positions include but are not limited to:

- CNC installation/maintenance technician
- Industrial electricians
- Industrial mechanics
- Industrial programmers
- Industrial maintenance workers

Example Careers and Average Wages

	Entry	Average	Experienced
Electrical and Electronics Repairers, Commercial and Industrial Equipment	$50,600	$61,200	$66,500
General Maintenance and Repair Workers	$29,500	$43,200	$50,100
Industrial Machinery Mechanics	$39,800	$52,700	$59,200
Machinery Maintenance Workers	$41,000	$53,400	$59,600
Mechanical Engineering Technologists and Technicians	$41,500	$56,300	$63,700
Electro-Mechanical and Mechatronics Technologists and Technicians (Robotics Technicians)	$47,300	$64,600	$73,300

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Advanced Heat Treat Corporation	Waterloo, IA
Blackhawk Engineering	Cedar Falls, IA
ConAgra Foods, Inc.	Waterloo, IA
Iowa Laser Technology	Cedar Falls, IA
John Deere	Waterloo, IA
Nestlé USA	Waverly, IA
Rockwell Automation	Cedar Rapids, IA
Target Distribution Center	Cedar Falls, IA
TDS Automation, Inc.	Waverly, IA
Tyson Foods, Inc.	Waterloo, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Industrial Automation Technology program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	40 Arithmetic	24& Pre-Algebra	14	240 Arithmetic 241 Quantitative Reasoning, Algebra, and Statistics	2.00
Reading	76	82	19	251	2.80
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Industrial Automation Technology AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	66
Program Start	Fall
Time to Complete	2 years

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1

ELT-139	Electrical Systems ►	8WK1	3	
EGT-140	Fluid Power	8WK2	2	
ELT-239	Advanced Electrical Systems ►	8WK2	3	
ELT-315	Digital Logic for Industrial Applications ► -OR-		2	
EGT-420	PLTW - Digital Electronics		3	
IND-111	Industrial Safety Mechanical Systems		1	
IND-153	Industrial Mechanics		3	
MAT-772	Applied Math -OR-		3	
	Math Elective		3	
		Total Credits	**17**	

Term 2

ELT-215	Motors and Controls ►	8WK1		2	
ELT-736	Instrumentation and Control ►	8WK1		2	
ELT-234	PLC Programming ►	8WK2		2	
WEL-339	Electromechanical Maintenance	8WK2		3	
EGT-149	Fluid Power Systems II ►			3	
MFG-193	Machine Shop Processes			3	
PSY-102	Human and Work Relations -OR-		O E	3	◆
PSY-111	Introduction to Psychology -OR-		O E	3	◆
SOC-110	Introduction to Sociology		O E	3	◆
			Total Credits	**18**	

Term 3

EGT-154	Pneumatics	8WK1	2	
EGT-212	Hydraulics Troubleshooting ►	8WK1	2	
ELT-532	Semiconductors for Industrial Applications ►	8WK1	2	
ELT-216	DC Controls Circuits ►	8WK2	2	
ELT-240	PLCs II ►	8WK2	2	
ELT-120	Schematics for Electromechanical Techs ►		3	
SPC-101	Fundamentals of Oral Communication		3	
		Total Credits	**16**	

Term 4

ELT-133	Electric Motor Drives	8WK1		2	
ELT-245	PLCs III ►	8WK1		2	
MFG-366	General CNC Mill Maintenance	8WK1		2	
ATR-145	Applied Industrial Robotics	8WK2		2	
ELT-444	Industrial Networking ►	8WK2		2	
ELT-818	Electrical Troubleshooting ►	8WK2		2	
COM-781	Written Communication in the Workplace ► -OR-		O E	3	◆
ENG-105	Composition I ►		O E	3	◆
		Total Credits 15			

Math Electives

MAT-102	Intermediate Algebra	4
MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4

Industrial Equipment Maintenance Diploma Courses

Award	Diploma
Credits	32
Program Start	Fall
Time to Complete	9 months

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1

ELT-139	Electrical Systems ►	8WK1	3
EGT-140	Fluid Power	8WK2	2
ELT-239	Advanced Electrical Systems ►	8WK2	3
ELT-315	Digital Logic for Industrial Applications ► -OR-		2
EGT-420	PLTW - Digital Electronics		3
IND-111	Industrial Safety Mechanical Systems		1
IND-153	Industrial Mechanics		3
MAT-772	Applied Math -OR-		3
	Math Elective		3
		Total Credits	**17**

Term 2

ELT-215	Motors and Controls ►	8WK1	2
ELT-736	Instrumentation and Control ►	8WK1	2
ELT-234	PLC Programming ►	8WK2	2
WEL-339	Electromechanical Maintenance	8WK2	3
EGT-149	Fluid Power Systems II ►		3
MFG-193	Machine Shop Processes		3
		Total Credits	**15**

Math Electives

MAT-102	Intermediate Algebra	4
MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4

Advanced Manufacturing Welding

The Advanced Manufacturing Welding program prepares you for a variety of welding careers. Coursework is aligned with the American Welding Society's SENSE standards. You will learn various welding techniques, including:

- Gas metal arc welding
- Thermal cutting
- Shielded metal arc welding
- Flux cored arc welding
- Gas tungsten arc welding

You will also gain the knowledge and skills in:

- Blueprint reading
- Metal types and the welding applications to use with them
- Metal cutting and fabrication
- Welding positions
- Pipe welding
- Weld inspection and testing
- Robotic welding

The program offers three levels of welding skills and techniques.

- The one-semester Welding certificate prepares you with the skills needed for general maintenance or production welding.
- The two-semester Intermediate Manufacturing Welding diploma prepares you with the skills needed for custom fabrication and construction welding.
- The three-semester Advanced Manufacturing Welding diploma prepares you with the skills needed in food production maintenance and high-end custom fabrication.

Hands-On Learning Opportunities

- **Welding Lab:** Use the latest welding equipment in the industry as you learn and perfect your welding skills on various type of metals.
- **Virtual Welder:** Become comfortable with various types of welds while learning how to reduce costs and improving your efficiency in a safe, controlled environment.
- **Robotic Welder:** Learn how to program and use robots to weld in modern manufacturing.

Certification

An independent certification laboratory evaluates your performance for possible certification with the American Welding Society.

Careers

Graduates find jobs as maintenance, production, manufacturing, construction, custom fabrication, or job shop welders. With advanced skill, graduates may find employment as pipe welders or iron workers.

Example Careers and Average Wages

	Entry	Average	Experienced
Welders, Cutters, Solderers, and Brazers	$32,700	$41,800	$46,300
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	$35,300	$41,700	$44,800

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Many graduates in this field work overtime. Overtime wages are not included in the above average wages.

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
ADA Enterprises, Inc.	Northwood, IA
Baumgartner Gate Factory	Manchester, IA
GMT Corporation	Waverly, IA
Iowa Laser Technology	Cedar Falls, IA
John Deere	Waterloo and Ottumwa, IA

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Welding program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	40 Arithmetic	24 Pre-Algebra	14	240 Arithmetic 241 Quantitative Reasoning, Algebra, and Statistics	2.00
Reading	58	69	16	239	2.50
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Advanced Manufacturing Welding Diploma Courses

Award	Diploma
Credits	44
Program Start	Fall, Spring
Time to Complete	1 year
Course Format	Face-to-Face

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1

WEL-228	Introduction to Welding, Safety, and Health of Welders: SENSE1	8WK1	1
WEL-233	Print Reading and Welding Symbol Interpretation: SENSE1	8WK1	3
WEL-274	Shielded Metal Arc Welding I: SENSE1 ►	8WK1	3
WEL-374	SMAW Developmental I ►	8WK1	2
WEL-245	Gas Metal Arc Welding Spray Transfer: SENSE1 ►	8WK2	2
WEL-262	Thermal Cutting Processes I - Manual and Mechanized OxyFuel Cutting: SENSE1 ►	8WK2	2
WEL-263	Thermal Cutting Processes II - Plasma and Carbon Steel Arc: SENSE1 ►	8WK2	2
WEL-346	GMAW Developmental I ►	8WK2	2
MAT-772	Applied Math -OR-		3
	Math Elective		3
		Total Credits	**20**

Term 2

WEL-244	Gas Metal Arc Welding Short Circuit Transfer: SENSE1 ►	8WK1	2
WEL-280	Flux Cored Arc Welding (Self-Shielded): SENSE1 ►	8WK1	2
WEL-281	Flux Cored Arc Welding (Gas-Shielded): SENSE1 ►	8WK1	2
WEL-347	GMAW Developmental II ►	8WK1	2
WEL-275	Shielded Metal Arc Welding II: SENSE1 ►	8WK2	3
WEL-375	SMAW Developmental II ►	8WK2	2
WEL-701	Robotic Welding		3
		Total Credits	**16**

Term 3 — Summer

WEL-252	Gas Tungsten Arc Welding for Aluminum: SENSE1 ►	1
WEL-253	Gas Tungsten Arc Welding for Austenitic Stainless Steel: SENSE1 ►	1
WEL-354	Gas Tungsten Arc Welding for Carbon Steel ►	3
WEL-355	Gas Tungsten Arc Welding: Developmental ►	3
	Total Credits	**8**

Math Electives	
MAT-102 Intermediate Algebra	4
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

Intermediate Manufacturing Welding: GMAW, SMAW, FCAW, and Robotics Diploma Courses

Award	Diploma
Credits	36
Program Start	Fall
Time to Complete	9 months
Course Format	Face-to-Face

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1 — Fall

WEL-228	Introduction to Welding, Safety, and Health of Welders: SENSE1	8WK1	1
WEL-233	Print Reading and Welding Symbol Interpretation: SENSE1	8WK1	3
WEL-274	Shielded Metal Arc Welding I: SENSE1 ►	8WK1	3
WEL-374	SMAW Developmental I ►	8WK1	2
WEL-245	Gas Metal Arc Welding Spray Transfer: SENSE1 ►	8WK2	2
WEL-262	Thermal Cutting Processes I - Manual and Mechanized OxyFuel Cutting: SENSE1 ►	8WK2	2
WEL-263	Thermal Cutting Processes II - Plasma and Carbon Steel Arc: SENSE1 ►	8WK2	2
WEL-346	GMAW Developmental I ►	8WK2	2
MAT-772	Applied Math -OR-		3
	Math Elective		3
		Total Credits	**20**

Term 2 — Spring

WEL-244	Gas Metal Arc Welding Short Circuit Transfer: SENSE1 ►	8WK1	2
WEL-280	Flux Cored Arc Welding (Self-Shielded): SENSE1 ►	8WK1	2
WEL-281	Flux Cored Arc Welding (Gas-Shielded): SENSE1 ►	8WK1	2
WEL-347	GMAW Developmental II ►	8WK1	2
WEL-275	Shielded Metal Arc Welding II: SENSE1 ►	8WK2	3
WEL-375	SMAW Developmental II ►	8WK2	2
WEL-701	Robotic Welding		3
		Total Credits	**16**

Math Electives	
MAT-102 Intermediate Algebra	4
MAT-110 Math for Liberal Arts ►	3
MAT-121 College Algebra ►	4
MAT-128 Precalculus ►	4
MAT-134 Trigonometry and Analytic Geometry ►	3
MAT-156 Statistics ►	3
MAT-210 Calculus I ►	4
MAT-216 Calculus II ►	4
MAT-219 Calculus III ►	4

Intermediate Manufacturing Welding: GTAW, Carbon Steel, Aluminum and Stainless Steel Diploma Courses

Award	Diploma
Credits	28
Program Start	Spring
Time to Complete	7 months
Course Format	Face-to-Face

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1 — Spring

WEL-228	Introduction to Welding, Safety, and Health of Welders: SENSE1	8WK1	1
WEL-233	Print Reading and Welding Symbol Interpretation: SENSE1	8WK1	3
WEL-274	Shielded Metal Arc Welding I: SENSE1 ►	8WK1	3
WEL-374	SMAW Developmental I ►	8WK1	2
WEL-245	Gas Metal Arc Welding Spray Transfer: SENSE1 ►	8WK2	2
WEL-262	Thermal Cutting Processes I - Manual and Mechanized OxyFuel Cutting: SENSE1 ►	8WK2	2
WEL-263	Thermal Cutting Processes II - Plasma and Carbon Steel Arc: SENSE1 ►	8WK2	2
WEL-346	GMAW Developmental I ►	8WK2	2
MAT-772	Applied Math -OR-		3
	Math Elective		3
		Total Credits	**20**

Term 2 — Summer

WEL-252	Gas Tungsten Arc Welding for Aluminum: SENSE1 ►	1
WEL-253	Gas Tungsten Arc Welding for Austenitic Stainless Steel: SENSE1 ►	1
WEL-354	Gas Tungsten Arc Welding for Carbon Steel ►	3
WEL-355	Gas Tungsten Arc Welding: Developmental ►	3
	Total Credits	**8**

Math Electives

MAT-102	Intermediate Algebra	4
MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Welding Certificate Courses

Award	Certificate
Credits	20
Program Start	Fall, Spring
Time to Complete	4 months
Course Format	Face-to-Face

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022 or Spring 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
►	Course has a prerequisite and/or corequisite.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1

WEL-228	Introduction to Welding, Safety, and Health of Welders: SENSE1	8WK1	1
WEL-233	Print Reading and Welding Symbol Interpretation: SENSE1	8WK1	3
WEL-274	Shielded Metal Arc Welding I: SENSE1 ►	8WK1	3
WEL-374	SMAW Developmental I ►	8WK1	2
WEL-245	Gas Metal Arc Welding Spray Transfer: SENSE1 ►	8WK2	2
WEL-262	Thermal Cutting Processes I - Manual and Mechanized OxyFuel Cutting: SENSE1 ►	8WK2	2
WEL-263	Thermal Cutting Processes II - Plasma and Carbon Steel Arc: SENSE1 ►	8WK2	2
WEL-346	GMAW Developmental I ►	8WK2	2
MAT-772	Applied Math -OR-		3
	Math Elective		3
		Total Credits	**20**

Math Electives

MAT-102	Intermediate Algebra	4
MAT-110	Math for Liberal Arts ►	3
MAT-121	College Algebra ►	4
MAT-128	Precalculus ►	4
MAT-134	Trigonometry and Analytic Geometry ►	3
MAT-156	Statistics ►	3
MAT-210	Calculus I ►	4
MAT-216	Calculus II ►	4
MAT-219	Calculus III ►	4

Career Area

SOCIAL SCIENCES AND PUBLIC SERVICES

Emergency Medical Services

Police Science

Emergency Medical Services

Paramedics use their skills to treat acute illnesses and work in traumatic situations along side firefighters. You'll learn all aspects of patient care in Hawkeye's state-of-the-art simulation lab before gaining real world experience through our hospital and field internship program.

The Emergency Medical Services (EMS) program prepares you for entry-level emergency medical technician (EMT) and paramedic positions. You will gain the knowledge and skills necessary to recognize, assess, and manage medical emergencies and patients with acute traumatic and medical conditions in a pre-hospital setting. You'll be prepared to provide optimal response and care to victims of any emergency, disaster, or mass casualty event. Skills include but are not limited to:

- Patient assessment and stabilization
- Medication administration
- Airway management and ventilation
- Patient records and documentation
- Wound care

EMS is a unique combination of public health, public safety, and acute patient care.

Hands-On Learning Opportunities

- **Patient Simulator Lab and Ambulance:** Learn how to handle and react to a variety of patient scenarios in controlled environments.
- **Clinical Experience:** Gain real-world work experience ensuring you have the skills you need to succeed in your future career.
- **EMS World Expo:** Hawkeye EMS students have a unique opportunity to attend EMS World Expo every year. Our with EMS Expo allows students to experience the event behind the scenes and work the conference in addition to attending education sessions.

Certification

Upon successful completion of the Paramedic Certification program, students are eligible to test for the National Paramedic Certification Examination with the National Registry of Emergency Medical Technicians (NREMT).

Upon successful completion of the EMS Associate of Applied Science (AAS) degree program, students are eligible to take national certification exams through the National Registry of Emergency Medical Technicians (NREMT).

Accreditation

The Emergency Services Program is accredited by the Commission on Accreditation of Allied Health Education Programs upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

To Contact CAAHEP

Commission on Accreditation of Allied Health Education Programs
9355 - 113th St. N, #7709
Seminole, FL 33775
727-210-2350
www.caahep.org

To Contact COAEMSP

8301 Lakeview Parkway, Suite 111-312
Rowlett TX 75088
214-703-8445
214-703-8992 (fax)
www.coaemsp.org

The Emergency Medical Services program is authorized by the Iowa Department of Public Health, Bureau of Emergency Medical Services (EMS).

Mission Statements

Hawkeye Community College EMS education program's mission is to provide high quality, relevant, and accurate EMS education and training opportunities for individuals, agencies, institutions, and organizations; both career and volunteer; in Hawkeye Community College's service district.

Hawkeye Community College's paramedic program goal is to prepare competent entry-level Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains with or without exit points at the Advanced Emergency Medical Technician and/or Emergency Medical Technician, and/or Emergency Medical Responder levels.

Paramedic Program Student Outcomes

	2017	2018	2019	2020	2021
Graduates	8	9	14	6	10
Retention	80%	90%	93%	85%	83%
Certification	75%	75%	78%	66%	100%
Positive Placement	100%	100%	100%	100%	100%

Transfer Information

Articulation agreements with Columbia Southern University and Upper Iowa University allow you to transfer your Emergency Medical Services coursework to earn a Bachelor of Science degree.

- Columbia Southern University's online Bachelor of Science in emergency medical services administration program, www.columbiasouthern.edu/bachelor-of-science-degree-emergency-medical-services-administration
- Upper Iowa University Bachelor of Science (BS) in Public Administration — Emergency Management Emphasis articulation agreement, www.hawkeyecollege.edu/webres/File/programs/EMS-articulation-agreement-UIU-BS-public-administration-emergency-management-emphasis.pdf
- Upper Iowa University Bachelor of Science (BS) in Emergency and Disaster Management, www.hawkeyecollege.edu/webres/File/programs/EMS-articulation-agreement-UIU-BS-public-administration-emergency-management-emphasis.pdf

If you plan to transfer, work closely with a program advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates may find employment working as emergency medical technicians (EMTs) or paramedics in fire departments, hospitals, private ambulance services, air medical services, federal agencies, and private corporations.

Example Careers and Average Wages

	Entry	Average	Experienced
Emergency Medical Technicians and Paramedics	$26,000	$38,400	$44,600

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

Business	Location
Area Ambulance Service	Cedar Rapids
CARE Ambulance, LLC	Iowa City
Davenport Fire Department	Davenport
Mason City Fire Department	Mason City
MEDIC EMS	Davenport
Mercy Medical Center	Cedar Rapids
MercyOne	Waterloo
North Benton Ambulance Service	Vinton
Waterloo Fire Rescue	Waterloo
Waverly Health Center	Waverly

Program Admission

1. Apply for admission at Hawkeye.
2. Send official transcripts to Admissions
3. Meet basic skill competencies in reading, writing, and math.

Emergency Medical Services Program Technical Standards

Technical Standards will help you assess your ability to succeed in the EMS program and the EMS profession. These technical standards include personal and professional attributes, skills, knowledge, physical, medical, safety, and other requirements that an individual must meet in order to be eligible for admission to and retention in the EMS program.

Hawkeye Community College serves a variety of individuals; therefore, the term "student" refers to any individual taking a course through Hawkeye Community College in some capacity. Students include those taking courses for credit as a degree or non-degree seeking student; those taking courses through Concurrent Enrollment (high school and college credit courses); and those taking courses through Business and Community Education or the Adult Learning Center.

Hawkeye complies with the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act of 1973, respective amendments and other applicable federal and state laws that prohibit discrimination on the basis of disability.

Clear academic and technical standards assure that decisions concerning entrance for all students are based upon non-discriminatory criteria. Federal law requires the provision of reasonable accommodations to persons with disabilities who possess "the academic and technical (non-academic) standards" for admission or participation in the EMS programs and courses.

Having technical standards available also assists potential applicants with or without disabilities to assess their ability to succeed in the program and the EMS profession. Technical standards for admission are all non-academic criteria that are essential to participate in the EMS program. These technical standards include personal and professional attributes, skills, knowledge, physical, medical, safety, and other requirements that an individual must meet in order to be eligible for admission to and retention in the EMS program.

Students admitted to the EMS program are expected to be able to complete curriculum requirements which include physical, cognitive, and affective core competencies that are essential to the functions of the entry level EMS provider.

These core competencies are considered the minimum and essential skills necessary to protect the public. These abilities are encountered in unique combinations in the provision of safe and effective EMS care. Progression in the program may be denied if a student is unable to demonstrate the technical standards with or without reasonable accommodations.

The Emergency Medical Services program is required to provide reasonable accommodations to qualified students with disabilities, which may include academic adjustments, auxiliary aids, and/or program modifications. Accommodations that fundamentally alter the nature of the academic program, could jeopardize the health and safety of others, or cause an undue burden to the program are not considered reasonable accommodations.

Technical Standard	Definition of Standards	Examples
Critical Thinking	Sufficient cognitive skills and critical thinking abilities such that the student can formulate and implement reasonable decisions based on available information in the absence of other personnel and/or supervisors; make fast and appropriate decisions in rapidly-evolving situations, particularly pertaining to creating and implementing a patient care plan in accord with established protocols.	• Assess scene safety in uncontrolled environments • Assess patient's medical history and condition • Determine and prioritize the severity of the illness/injury • Determine correct treatment modalities, including exceptions to approved modalities • Determine limits of acceptable span of control in ordinary/extraordinary circumstances (ex: hazardous scene)
Problem Solving Skills	Ability to calmly intervene in various stressful, emergency situations; make correct initial decisions and draw reasonable conclusions that allow selection and pursuit of acceptable outcome options; synthesize information gathered from consecutive assessments.	• Formulate correct decisions • Integrate correct treatment protocol(s) • Devise an accepted plan to provide patient care in typical/atypical case • Utilize standard accepted equipment for safe patient care and movement
Interpersonal Skills	Sufficient ability to interact with individuals, families, groups, public safety personnel and other medical professionals from a variety of social, emotional, cultural, and intellectual backgrounds.	• Establish and maintain supportive relationships with patients, family members, bystanders, public safety, media, political officials, and other health care providers under stressful and non-stressful situations
Communication Skills	Sufficient ability to interact effectively with others via the English language using non-verbal, verbal, and written forms of communication. Communication occurs via face-to-face interaction, telephone, two-way radio, and computer-based written reports.	• Ask questions to quickly obtain information related to emergency situations • Receive and interpret information from patients, bystanders, other responders • Identify and communicate the need for additional resources • Request and clarify orders from supervisors

Technical Standard	Definition of Standards	Examples
Coping Skills	Ability to deal effectively with stress produced by work and interaction situations.	• Appropriately handle emotional situations that affect citizens, victims, families, friends, coworkers, bystanders, and other public safety personnel • Recognize personal limitations and request assistance as appropriate
Mobility	Sufficient physical abilities to drive and work in an ambulance; lift, and move immobile patients; engage in regular physical fitness training; prolonged standing, walking; jogging/running; jumping; climbing; crawling; pushing/pulling; negotiating stairs, hazardous and/or uneven terrain, all while carrying a patient in or on a carrying device.	• Quickly enter/exit and drive an ambulance or other emergency vehicle without assistance • Perform physical EMS activities such as CPR, airway management, medication administration, lifting and moving patients in a variety of body positions and environmental conditions • Recognize and negotiate hazards in all environmental extremes including but not limited to light/dark, heat/cold, wet/dry/frozen scenes • Wear appropriate personal protective equipment (PPE) without assistance (ex: gloves, masks, etc.) • Perform rescue duties • Operate emergency vehicle under extreme environmental conditions
Motor Skills	Ability to perform gross and fine motor skills required in the performance EMS duties as indicated in the state and national standard curriculum.	• Perform physical tasks requiring prolonged physical exertion (ex: walking for long periods of time while carrying equipment and/or patients, vehicle extrication, extrication of a victim from the confines of a structure) • Perform tasks requiring walking, crawling, stooping, bending, kneeling, or working prone or supine

Technical Standard	Definition of Standards	Examples
Auditory Skills	Sufficient auditory ability to quickly send and receive information, engage in urgent situations, discern personal danger at emergency scenes, hear requests for aid, hear verbal orders and instructions from other people in noisy environments; safely operate patrol vehicle under emergency conditions.	• Effectively use sense of hearing to aid in assessing the scene and patients in duress • Recognize various signals from medical equipment or emergency alarms, dangers/warnings associated with hazardous scenes • Communicate via two-way radio and telephone links • Receive and respond to instructors, team leaders and others
Visual Skills	Sufficient visual acuity (corrected or not) for safe performance of EMS duties under normal and emergency conditions; observation and implementation of appropriate care for patients; assessment and determination of scene hazards potentially effecting the safety of self and others.	• Recognize signs during patient assessment • Recognize hazards, interpret indicators and measurements from medical monitoring and treatment equipment • Discern settings and parameters of settings of medical equipment such as cardiac monitor/defibrillator, ventilator, syringes, size identifiers, medical procedures such as starting an I.V., administering medication, reading an EKG • Prepare and submit written reports
Tactile Skills	Sufficient sense of touch and tactile acuity necessary in the performance of EMS duties.	• Palpate a pulse and detect changes or abnormalities of surface, texture, skin temperature, body segment contour, muscle tone and/or joint movement

Technical Standard	Definition of Standards	Examples
Environmental	Olfactory senses sufficient for maintaining environmental, personal, and coworker safety, and for detecting changes that may indicate a deterioration in the current environment or the presence of a hazardous situation.	• Detect and identify smells, visible signs, audible signals related to EMS duties and contributory to self-preservation and safety of others, including but not limited to smoke, burning materials, gasoline and noxious fumes
Emotional/Behavioral	Ability to demonstrate professional behaviors and a strong work ethic.	• Demonstrate flexibility, honesty, empathy, patience and cooperative behaviors • Display high levels of personal responsibility, accountability and development • Demonstrate respect for citizens, patients, witnesses, suspects, and other public safety professionals • Maintain strict confidentiality of federally protected healthcare information, present a professional appearance and maintain personal hygiene

In the case of an otherwise qualified individual with a documented disability, appropriate and reasonable accommodations will be made unless to do so would fundamentally alter the essential training elements, cause undue hardship, or produce a direct threat to the safety of the patient or student. Hawkeye believes that disability is a naturally occurring aspect of humanity's diversity and is an integral part of society and Hawkeye Community College. Hawkeye believes in working collaboratively with students, faculty, and staff to provide accessible and equal opportunities for all students.

Your Criminal History Matters

As a future emergency services responder, students need to use good judgment in all areas of their personal, professional, and scholastic interactions and activities; and must keep their records clean. All hospitals, EMS, and fire agencies require background checks for internships, volunteer placements, and employment.

Be aware that character counts and your behavior can sabotage your ability to graduate from this program and your ability to work in the field. Consider what your actions and criminal history says about you….i.e. an OWI conviction indicates that you demonstrate poor judgment by drinking to excess and deciding to drive, which may kill or injure you or another person.

If you want to work in emergency services, avoid these issues:

- Acquiring speeding tickets or safety violation citations.
- Acquiring a suspended driver's license or citations for driving with a suspended license.
- Participating in underage drinking, using fake ID's, or buying alcohol for underage persons.
- Use or abuse of prescription drugs, street drugs, club drugs (ecstasy), marijuana, or synthetic drugs.
- Engaging in theft of property, goods, or services.
- Assault or battery related cases.

You will not be employable in emergency services if you have:

- Felony convictions.
- Domestic abuse convictions.
- Placement on an abuse registry (sex offender, child/elder abuse).
- Drug convictions, or history of drug use or abuse (methamphetamine, cocaine, heroin, etc.) Each agency (city, county, state, or federal) sets their own limits on marijuana use from zero tolerance to a limited amount of use, and factors in how recent the use was.

Ultimately, potential employers will rationalize your behavior by this criteria: If you know or reasonably believe an action is illegal or will cause harm then the best candidate will take responsibility, demonstrate self-control, and not do it.

Lastly, employers will ask our faculty for references. Students need to know that full time faculty and adjunct faculty members are constantly formally and informally assessing students in terms of academic performance, attendance, honesty, professionalism, social skills, maturity, and appearance so that we can make objective assessments when asked. Your interactions count, and we are here to mentor you.

Emergency Medical Services AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	69
Enrollment	Full-time
Program Start	Fall, Spring, Summer
Time to Complete	2 years
Course Format	Face-to-Face
Class Meets	Daytime

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022, Spring 2023, or Summer 2023. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
►	Course has a prerequisite and/or corequisite.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1			
BIO-168	Human Anatomy and Physiology I		4
EMS-201	Emergency Medical Technician ► -OR-		7
EMS-363	Emergency Medical Technician I ► -AND-	8WK2	3
EMS-364	Emergency Medical Technician II ► -AND-	8WK1	3
EMS-365	Emergency Medical Technician II Clinical ►	8WK1	1
ENG-105	Composition I ►		3
HSC-113	Medical Terminology		2
		Total Credits	**16**

Most Term 1 courses can be taken during the fall, spring, or summer.

Term 2

BIO-173	Human Anatomy and Physiology II ►	4	
EMS-114	Emergency Medical Responder -OR-	2	
EMS-856	Management of Emergency Medical Services -OR-	3	
EMS-900	Education in EMS -OR-	3	
FIR-139	Fire Fighter I -OR-	4	
FIR-213	Principles of Emergency Services -OR-	3	
FIR-214	Legal Aspects of Emergency Services -OR-	3	
CRJ-285	Physical Conditioning for Public Services	2	
MAT-110	Math for Liberal Arts ► -OR-	3	◆
MAT-156	Statistics ► -OR-	3	◆
MAT-121	College Algebra ►	4	◆
SOC-110	Introduction to Sociology -OR-	3	◆
PSY-111	Introduction to Psychology	3	◆
SPC-101	Fundamentals of Oral Communication	3	
		Total Credits 15	

Most Term 2 courses can be taken during the fall, spring, or summer.

Term 3 — Fall

EMS-541	Clinical I ►	3
EMS-610	Paramedic Pharmacology and Medication Administration ►	4
EMS-619	Airway and Patient Assessment ►	4
EMS-641	Introduction to Paramedicine ►	3
EMS-674	Cardiology for the Paramedic ►	4
	Total Credits 18	

Term 4 — Spring

EMS-546	Clinical II ►	3
EMS-650	Medical and Psychological Emergencies ►	4
EMS-677	Special Populations for the Paramedic ►	4
EMS-678	Traumatic Emergencies for the Paramedic ►	3
	Total Credits 14	

Term 5 — Summer		
EMS-654	EMS Operations ►	2
EMS-655	Transition to Paramedic Practice ►	4
		Total Credits 6

Paramedic Certificate Courses

Award	Certificate
Credits	38
Enrollment	Full-time
Program Start	Fall
Time to Complete	1 year
Course Format	Face-to-Face
Class Meets	Daytime

Prior to the first day of classes you will be required to complete all of the following background screenings: Drug screening, criminal background, sex offender, and adult/dependent abuse background checks. Failing a drug screening or background check will result in dismissal from the program.

Prior to the first day of classes you must be Basic Life Support for Healthcare Provider CPR certified.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

- ◆ General education course.
- ► Course has a prerequisite and/or corequisite.

Students must achieve a minimum "C-" grade in all courses required to complete the program.

Term 0 — Prerequisites		
BIO-168	Human Anatomy and Physiology I	4
BIO-173	Human Anatomy and Physiology II ►	4
HSC-113	Medical Terminology	2
	Total Credits	**10**

Term 1 — Fall

EMS-541	Clinical I ►	3
EMS-610	Paramedic Pharmacology and Medication Administration ►	4
EMS-619	Airway and Patient Assessment ►	4
EMS-641	Introduction to Paramedicine ►	3
EMS-674	Cardiology for the Paramedic ►	4
	Total Credits	**18**

Term 2 — Spring

EMS-546	Clinical II ►	3
EMS-650	Medical and Psychological Emergencies ►	4
EMS-677	Special Populations for the Paramedic ►	4
EMS-678	Traumatic Emergencies for the Paramedic ►	3
	Total Credits	**14**

Term 3 — Summer

EMS-654	EMS Operations ►	2
EMS-655	Transition to Paramedic Practice ►	4
	Total Credits	**6**

Police Science

Interested in a career where you can make a difference? Consider a career in public service!

The Police Science program prepares you for a career in public service. This degree will enable you to work in law enforcement, corrections, or security; plus lay a foundation for you to work in adult or juvenile probation and parole, or legal work. Our graduates work in many different roles at the city, county, state, and federal levels.

Careers in public service need trainable people who are of good character with limited criminal history and devoted to solving problems and making communities better. An interest in law is helpful, but not required; but prepare to hone your writing, math, and speaking skills.

Next generation public service professionals are people just like you, interested in helping and protecting others, solving problems, advocating for victims, and interacting with their community. All you need to have is a willingness to build your knowledge, physical fitness, technical, and interpersonal skills.

At Hawkeye Community College our curriculum focuses on building your knowledge and skills through classes such as:

- Police operations
- Crime scene, accident, and general investigations
- Critical incident management
- Criminal and constitutional law
- Report writing and testifying
- Physical fitness conditioning
- Safe and legal use of force in defensive tactics and firearms

All Police Science instructors have law enforcement experience, academic training, and are dedicated to mentoring students. Instructors will coach you to ensure you make ethical choices, maintain a clear criminal history, and care for your physical and emotional fitness and resiliency.

Hands-On Learning Opportunities

- **Crime Scene Lab:** Practice legal and ethical evidence collection techniques and analysis.
- **Indoor and Outdoor Firing Ranges:** Learn safe operation of, and care and maintenance of, firearms
- **Virtual Firearms Simulator System (MILO):** Learn and practice decision making skills with scenarios that require you to reason appropriate use of force.
- **Internship:** Gain 128 hours of real-world work experience ensuring you have the skills you need to succeed in your future career.

Police Academy

Graduates, either newly hired or sponsored by a law enforcement agency, are eligible to attend the New Officer 9-Week Basic Level II Certification Academy. Hawkeye is designated as a Regional Law Enforcement Training Facility by the Iowa Law Enforcement Academy.

Transfer Information

An articulation agreement allows you to transfer your Police Science coursework to either the Bachelor of Applied Science in Criminal Justice program at the University of Northern Iowa or the Bachelor of Applied Science program at the University of Iowa.

If you plan to transfer, work closely with the Police Science academic / college success advisor to ensure courses transfer and you meet program requirements.

Careers

Graduates are eligible to work in a variety of capacities within the criminal justice field, including city and county law enforcement agencies, corrections and probation systems, and private/corporate security. Additional education and experience may be required to work in specific capacities at the state and federal levels.

The ability to be hired by a law enforcement agency may be impaired by any arrest record, juvenile or adult.

Example Careers and Average Wages

	Entry	Average	Experienced
Detectives and Criminal Investigators	$55,100	$79,700	$92,000
Gambling Surveillance Officers and Gambling Investigators	$26,700	$36,100	$40,800
Police and Sheriff's Patrol Officers	$45,800	$62,100	$70,300
Private/Corporate Security Guards	$22,200	$34,000	$39,900

Source: 2021 Iowa Wage Report, Iowa Workforce Development

Employers

The following is a partial list of employers who have hired graduates from this program:

- Police departments throughout Iowa
- County sheriff's offices throughout Iowa
- Iowa State Patrol
- Iowa Department of Motor Vehicle Enforcement
- Local, state, and federal law enforcement agencies throughout the United States

Program Admission

STEP 1 Apply at Hawkeye

1. Apply for admission at Hawkeye.

2. Send official transcripts to Admissions.

If you have military or reserve officer training, send transcripts for evaluation to receive possible credit for your training.

STEP 2 Demonstrate College Readiness

In order to be eligible for the Police Science program, all students must meet minimum score requirements and/or successfully complete the required college success courses in English, reading, and math with a C- grade or higher at Hawkeye Community College or comparable courses at another accredited college. For appropriate college success course placement, work with your program advisor.

	ACCUPLACER	COMPASS	ACT	ACCUPLACER Next Generation	GPA
Math	40 Arithmetic	24 Pre-Algebra	14	240 Arithmetic 241 Quantitative Reasoning, Algebra, and Statistics	2.00
Reading	58	69	16	239	2.50
Writing	64 Sentence Skills	41	16	240	2.50

STEP 3 Program Acceptance

Applicants successfully demonstrating college readiness criteria are eligible for acceptance.

Applicants falling short of successful demonstration of college readiness criteria will be accepted to a Pre-Program. As a pre-program student, you will begin with general education and prerequisite classes. An advisor will help you create an academic plan to meet your program admission requirements. Once you have completed your pre-program coursework contact Admissions.

Your Criminal History Matters

As a future criminal justice professional, students need to use good judgment in all areas of their personal, professional, and scholastic interactions and activities; and must keep their records clean. Criminal justice organizations require background checks for internships, volunteer placements, and employment; which will include adult and juvenile civil and criminal issues, official and informal contacts with police, and character references. Employment will also hinge on the successful completion of a polygraph, credit check, and psychological evaluation.

Be aware that character counts and your behavior can sabotage your ability to graduate from this program and your ability to work in the field. Consider what your actions and criminal history says about you….i.e. an OWI conviction indicates that you demonstrate poor judgment by drinking to excess and deciding to drive, which may kill or injure you or another person. Remember your personal behaviors (what you didn't get caught for) will be revealed during the polygraph, and what you do privately (when no one is watching or supervising) speaks volumes as to the true content of one's character.

If you want to work in criminal justice avoid these issues:

- Acquiring speeding tickets or safety violation citations.
- Acquiring a suspended driver's license or citations for driving with a suspended license.
- Participating in underage drinking, using fake ID's, or buying alcohol for underage persons.
- Use or abuse of prescription drugs, street drugs, club drugs (ecstasy), marijuana, or synthetic drugs.
- Engaging in theft of property, goods, or services.

You will not be employable in criminal justice if you have:

- Felony convictions.
- Domestic abuse convictions.
- Placement on an abuse registry (Sex offender, child/elder abuse).
- Drug convictions, or history of drug use or abuse (methamphetamine, cocaine, heroin, etc.) Each agency (city, county, state, or federal) sets their own limits on marijuana use from zero tolerance to a limited amount of use, and factors in how recent the use was.
- Weapons violations.

Ultimately, criminal justice employers will rationalize your behavior by this criteria: If you know or reasonably believe an action is illegal or will cause harm then the best candidate will take responsibility, demonstrate self-control, and not do it.

Lastly, employers will ask our faculty for references. Students need to know that full-time faculty and adjunct faculty members are constantly formally and informally assessing students in terms of academic performance, attendance, honesty, professionalism, social skills, maturity, and appearance so that we can make objective assessments when asked. Your interactions count, and we are here to mentor you.

Police Science AAS Degree Courses

Award	Associate of Applied Science (AAS)
Credits	62
Program Start	Fall
Time to Complete	2 years

Students convicted of a felony will not be allowed to enroll in the Firearms and Practicum courses and will not graduate from the Police Science program. Learn how your criminal history matters.

2022–2023 Suggested Sequence of Study

The following suggested sequence of study is for new full-time students starting the program Fall 2022. Part-time students should visit with a program advisor for a modified sequence of study.

When registering for classes refer to Self-Service > Student Planning to view your specific program requirements, your progress, and ensure proper registration.

Courses are subject to change.

◆	General education course.
▣	Non-transfer general education course.
▶	Course has a prerequisite and/or corequisite.
O	Course meets 100% online.
E	Course meets face-to-face after 5:00pm.
8WK1	Course meets the first 8 weeks of the term.
8WK2	Course meets the second 8 weeks of the term.

Term 1				
CRJ-100	Introduction to Criminal Justice		3	
CRJ-143	Police Operations		3	
CRJ-234	Traffic Law		2	
CRJ-320	Criminal Justice Ethics		3	
SOC-110	Introduction to Sociology -OR-	O E	3	◆
SOC-115	Social Problems -OR-	O E	3	◆
SOC-205	Diversity in America	O E	3	◆
		Total Credits	**14**	

Term 2

CRJ-135	Criminal Evidence ►		3	
CRJ-237	Criminal and Constitutional Law		3	
CRJ-244	Advanced Accident Investigation ►		3	
CRJ-316	Juvenile Justice ►		3	
MAT-110	Math for Liberal Arts ► -OR-	O E	3	◆
MAT-156	Statistics ► -OR-	O E	3	◆
MAT-772	Applied Math		3	▣
		Total Credits	**15**	

Term 3

CRJ-252	Basic Firearms ►	8WK1	1
CRJ-254	Advanced Firearms ►	8WK2	1
CRJ-151	Defensive Tactics ►		2
CRJ-200	Criminology		3
CRJ-282	Crime Scene Investigation ►		3
CRJ-285	Physical Conditioning for Public Services		2
EMS-114	Emergency Medical Responder -OR-		2
EMS-201	Emergency Medical Technician ►		7
ENG-105	Composition I ►		3
		Total Credits	**17**

Term 4

CRJ-141	Criminal Investigation ►		3
CRJ-266	Report Writing and Testifying ►		3
CRJ-315	Crisis Intervention ►		3
CRJ-322	Tactical Police Operations ►		2
CRJ-952	Internship ►		2
SPC-101	Fundamentals of Oral Communication		3
		Total Credits	**16**

COURSE DESCRIPTIONS

ACC: Accounting

ACC-115 Introduction to Accounting

This course presents the fundamental concepts, procedures, and applications of the accounting cycle for service and merchandising businesses. The proprietorship form of ownership is studied. Topics include the special journals, payroll accounting, and accounting for cash.

Credit Hours: 4 Lecture Hours: 64

Course Type: Technical

ACC-116 Introduction to Accounting II

This course is a continuation of Introduction to Accounting (ACC-115) emphasizing the principles of accrual accounting. Emphasis is placed on accounting for corporations and a manufacturing business. Topics include accounting for receivables, inventory, and long-term assets.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of C in ACC-115 or ACC-131.

Course Type: Technical

ACC-131 Principles of Accounting I

This course is an introduction to basic financial accounting concepts and procedures for service and merchandising businesses and the corporate form of ownership. Topics included are the accounting cycle; accounting systems; financial statements; accounting for cash, receivables, payables, inventories, plant assets, bonds, and stock.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of D- in MAT-063, or minimum score of 42 on the Algebra test, or Math ACT score of 19 or higher.

Course Type: General Education / Transfer

ACC-132 Principles of Accounting II

The course continues to address topics in financial accounting that began in Principles of Accounting I. Primary emphasis is on managerial accounting and the corporate form of ownership. Topics include the statement of cash flows and financial statement analysis. Managerial accounting topics include job order and process cost systems, cost-volume-profit analysis, budgeting and standard cost systems. Capital investment analysis and activity-based costing are also addressed.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of C- in ACC-131.

Course Type: General Education / Transfer

ACC-160 Payroll Accounting

This course is a study of payroll from payroll laws to journalizing payroll transactions. Emphasis is on computing wages, social security taxes, income tax withholding, unemployment taxes, and journalizing payroll transactions with hands-on experience in preparing all the necessary monthly, quarterly and annual reports. An accounting payroll project will provide hands-on experience in preparing a payroll.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Pre/Co-requisite(s): A minimum grade of C- in ACC-115 or ACC-131.

Course Type: Technical

ACC-190 Financial Analysis

This course provides the student with a general framework of corporate finance. The emphasis is limited to financial analysis of business performance and evaluation of alternative choices for investments and working capital.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): A minimum grade of C in ACC-132 or ACC-116.

Course Type: Technical

ACC-222 Cost Accounting

This course provides an introduction to the accounting concepts of manufacturing systems. In addition to job order and process costing systems, profit planning and control programs are emphasized.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of C in ACC-132 or ACC-116.

Course Type: Technical

ACC-231 Intermediate Accounting I

This course emphasizes accounting theory as students work with detailed applications of various balance sheet and income statement accounts. Applicable generally accepted accounting principles are emphasized as they relate to each subject area. Time values of money concepts are also introduced.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of C in ACC-116 or ACC-132.

Course Type: Technical

ACC-232 Intermediate Accounting II

This course continues the detailed applications that began in Intermediate Accounting I. Emphasis is on corporate debt and equity. The statement of cash flows is addressed extensively as well as the accounting for business combinations. The course will conclude with financial statement analysis.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of C in ACC-231.

Course Type: Technical

ACC-265 Income Tax Accounting

Emphasis is placed on the understanding of the federal tax system. The student will gain hands on experience preparing the most current tax forms for sole proprietorship businesses and individuals. Tax planning is addressed as it relates to the current and forthcoming year. Students will be provided with an opportunity to use computer software to prepare returns.

Credit Hours: 4 Lecture Hours: 64

Course Type: Technical

ACC-310 Computer Accounting

Provides students with practice and application of the accounting cycle on microcomputers. Topics include ledgers, accounts receivable and payable, payroll, inventory and depreciation. Integrated software packages are introduced.

Credit Hours: 2 Lab Hours: 64

Prerequisite(s): A minimum grade of C- in ACC-115 or ACC-131.

Course Type: Technical

ACC-360 Accounting Spreadsheets

This course provides the student with an in depth working knowledge of how to use an integrated spreadsheet program to assist in routine jobs. Writing formulas is emphasized along with planning and creating spreadsheets.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in BCA-205.

Course Type: Technical

ACC-803 Accounting Simulations

This course provides hands-on experience using a manual and computerized simulation of an accounting cycle. The proprietorship form of business, accrual accounting and other concepts learned in the first accounting course will be the basis for the simulation.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): A minimum grade of C in ACC-115 or ACC-131.

Course Type: Technical

ACC-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

Can be completed for up to three credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ADM: Administrative Assistant

ADM-105 Introduction to Keyboarding

This course presents the technique and development of touch keyboarding. Basic functions of a computer are introduced with emphasis on learning alphabetic, numeric and symbolic keys, and the numeric keypad. The minimum competency of 25 net words per minute, with no more than five errors per timing, on 3 five-minute timed writings is required.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

ADM-108 Keyboarding Skill Development

The touch keyboarding skill building process is emphasized. This course assists students to improve speed and accuracy and improve their technique on the alphabetic, number and symbol keys. The minimum competency of 35 net words per minute, with no more than five errors per timing, on 3 five-minute timed writings is required.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

ADM-164 Administrative Office Applications

This course will integrate the skills and personal qualities necessary for an administrative assistant to perform the operational and supervisory functions for today's computerized office. Simulated office activities in a team environment will be completed using integrated software, problem-solving techniques, and decision-making experiences with special emphasis on creativity, computer applications, and professionalism.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

ADM-200 Legal Document Processing

This course familiarizes students with various fields of law and the proper preparation of legal documents utilized in each. Students will apply various skills in preparing legal documents, including transcription skills, communication skills, problem-solving skills, and technical skills.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D- in BCA-134.

Pre/Co-requisite(s): A minimum grade of D- in ADM-157.

Course Type: Technical

ADM-203 Legal Office Concepts and Procedures

This course provides an understanding of the legal office environment and offers a broad spectrum of legal concepts and procedures.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D- in BCA-134.

Course Type: Technical

ADN: Associate Degree Nursing

ADN-121 Transition to Professional Nursing

This course focuses on the associate degree nurse as transition occurs from the licensed practical nurse role to the registered nurse role. Course content includes an overview of ethical, legal, and the professional roles/responsibilities of the registered nurse, delegation, prioritization, nursing process, and critical thinking.

Admission to the Associate Degree Nursing Program. This course begins the 3 year time limit for completion of the ADN curriculum. An active permanent Practical Nursing license in good standing is required prior to ADN-226.,

Credit Hours: 2 Lecture Hours: 32

Pre/Co-requisite(s): Minimum grade of B in ADN-122 and ADN-231.

Course Type: Technical

ADN-122 Advanced Nursing Skills

This course provides supervised practice in a variety of advanced nursing skills in both a lab and clinical setting. Competence in selected nursing skills will be demonstrated in the provision of safe nursing care.

Admission without conditions to the Associate Degree Nursing Program for the current semester.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Pre/Co-requisite(s): Minimum grade of B in ADN-121 and ADN-231.

Course Type: Technical

ADN-124 Complex Health Alterations

This course is a study of the concepts of health and illness and of the nursing process in providing comprehensive nursing care for adults requiring complex medical and surgical care. The content includes a review of select respiratory (acid base), endocrine, musculoskeletal, neurological, pain, immunity, and HIV/AIDs health alterations.

Credit Hours: 3 Lecture Hours: 48

Pre/Co-requisite(s): Minimum grade of (P/F) in ADN-125. Minimum grade of B in ADN-128.

Course Type: Technical

ADN-125 Nursing Clinical V

This clinical course provides opportunities for students to incorporate concepts from course work in bio/psycho/social sciences, humanities, nursing and current evidence-based literature to provide safe, competent care of adult clients experiencing common complex alterations in body systems. The course utilizes the nursing process in order to achieve best practice outcomes in a medical/surgical setting. Particular emphasis is placed on concepts of holistic care, client education, and critical thinking for clients with respiratory (acid base), endocrine, musculoskeletal, neurological, sensory, pain, and immunity disorders complex health alterations.

Credit Hours: 2 Clinic Hours: 96

Pre/Co-requisite(s): Minimum grade of B in ADN-124 and ADN-128.

Course Type: Technical

ADN-128 Community and Mental Health Nursing

This course focuses on the study and application of modern concepts of community and advanced psychiatric nursing. The nursing process will be used to therapeutically plan client cares, applying the principles of community nursing, mental health, and psychiatric nursing.

Credit Hours: 2 Lecture Hours: 32

Pre/Co-requisite(s): Minimum grade of B in ADN-124. Minimum grade of (P/F) in ADN-125.

Course Type: Technical

ADN-224 Complex Health Alterations B

The course is a study of the concepts of health and illness utilizing the nursing process in providing comprehensive nursing care for adults requiring complex medical and surgical care. The content includes a review of select cardiovascular, hematology/oncology, fluids/electrolytes (hypovolemic shock), integumentary (burns), gastrointestinal, renal/male reproductive health alterations and physiological adaptations.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Admission criteria. PN Practical Nurse License in Good Standing.

Pre/Co-requisite(s): Minimum grade of (P/F) in ADN-225. Minimum grade of B in ADN-331.

Course Type: Technical

ADN-225 Nursing Clinical VI

This clinical course provides opportunities for students to incorporate concepts from course work in bio/psycho/social sciences, humanities, nursing and current evidence-based literature to provide safe, competent care of adult clients experiencing common complex alterations in body systems. The course utilizes the nursing process in order to achieve best practice outcomes in a medical/surgical setting. Particular emphasis is placed on concepts of holistic care, client education and critical thinking for clients with cardiovascular, hematology/oncology, fluids/electrolytes (hypovolemic shock), integumentary (burns), gastrointestinal, and renal/male reproductive.

Credit Hours: 2 Clinic Hours: 96

Prerequisite(s): Minimum grade of B in ADN-224 and ADN-331.

Course Type: Technical

ADN-226 Complex Maternal Child Health Alterations

This course builds on the concepts of previous nursing courses with an emphasis on the care of high risk maternal and pediatric clients. The focus will be on health promotion, ethical/legal considerations, family-centered care and common alterations seen in high risk maternal and pediatric clients.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Minimum grade of B in ADN-121, ADN-122, ADN-124, ADN-231, and ADN-128.

Pre/Co-requisite(s): Minimum grade of (P/F) in ADN-227. Minimum grade of B in ADN-333.

Course Type: Technical

ADN-227 Nursing Clinical Community and Special Populations

This clinical course provides opportunities for students to incorporate concepts from course work in bio/psycho/social sciences, humanities, nursing and current evidence-based literature to provide safe, competent care of maternal, pediatric, mental health and community clients experiencing complex alterations in body systems. The course utilizes the nursing process in order to achieve best practice outcomes in a medical/surgical setting. Particular emphasis is placed on concepts of holistic care, client education and critical thinking.

Credit Hours: 2 Clinic Hours: 96

Prerequisite(s): Minimum grade of B in ADN-121, ADN-122, ADN-124, ADN-125, ADN-128, and AND-231.

Pre/Co-requisite(s): Minimum grade of B in ADN-226 and ADN-333.

Course Type: Technical

ADN-231 Advanced Pharmacology

This course examines advanced medication administration principles. Emphasis will be placed on intravenous medication therapy, calculation of dosages, infusion rates and titrations. Nursing implications of medication administration in complex health conditions are explored.

Credit Hours: 2 Lecture Hours: 32

Pre/Co-requisite(s): Minimum grade of B in ADN-121 and ADN-122.

Course Type: Technical

ADN-315 Professional Roles of Nursing Practice

This course focuses on the role of professional nursing, the implementation of leadership and managerial aspects within the nursing discipline. This course will discuss roles of the registered nurse, the nursing process, critical thinking, and Evidence Based Practice guidelines within nursing practice. Preparation for employment is also included.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

ADN-331 Issues in Nursing Management

This course focuses on the study and application of the managerial and leadership aspects of professional nursing. Preparation for the licensing exam, career opportunities, and job searches are also included.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Minimum grade of B in ADN-121, ADN-122, ADN-124, ADN-128, and ADN-231.

Pre/Co-requisite(s): Minimum grade of B in ADN-128, ADN-224, ADN-226, and ADN-333.

Course Type: Technical

ADN-333 Holistic Client Care

The course reviews holistic care including personal wellness, clinical reasoning, critical thinking, alternative therapies and end of life care.

Credit Hours: 2 Lecture Hours: 32

Pre/Co-requisite(s): Minimum grade of B in ADN-226. Minimum grade of (P/F) in ADN-227.

Course Type: Technical

ADN-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

AGA: Agriculture — Agronomy

AGA-114 Principles of Agronomy

Provides a foundation course in agronomy. Applies crop, soil, and environmental sciences in understanding agricultural systems in the world. Introduces concepts of plant, soil, tillage, pest, environmental, and sustainable aspects of crop production. It includes hands-on learning experiences.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGA-154 Fundamentals of Soil Science

Introduces physical, chemical, and biological properties of soils, their formation, classification, and distribution. Uses soils survey and other information sources in balancing agronomic, economic, and environmental concerns in soil management.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGA-214 Cash Grains

This course introduces the production of Iowa's main cash crops; corn and soybeans. Units include: crop history, crop development, seed selection, fertilization, insect and weed control, harvesting, grain handling, marketing, storage and the economic importance of each crop. New and experimental production practices are discussed for practical application.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGA-284 Pesticide Application Certification

This course will introduce students to the safe use of agricultural chemicals. Safety precautions and prevention of chemical exposure will be stressed when discussing types of chemicals, usage, application, equipment, and mixing. First aid and responding to chemical contamination will also be discussed. This course prepares the students for taking the Iowa Commercial Pesticide Applicators Certification Exam.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGA-376 Integrated Pest Management

This course is designed to make application and use of some materials learned in other courses. Decision making as it deals with the total cropping plan is stressed. An individual will determine from observation weed problems, plant populations, disease problems, insect problems, do yield checks, make recommendations for handling any problems.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGA-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

AGB: Agriculture — Farm Management

AGB-101 Agricultural Economics

This course introduces students to basic concepts in economics, including various aspects of an economy-like agriculture, industry, population, food supply, government policies and physical environmental affect on each other and the economy as a whole. Resources used in agricultural production, organization price determination, supply, demand, and profit modernization is studied.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGB-235 Introduction to Agriculture Markets

Presents basic concepts and economics principles related to markets for agricultural inputs and products. Overview of current marketing problems faced by farms and agribusinesses, farm and retail price behavior, structure of markets, food marketing channels, food quality and food safety, and the role of agriculture in the general economy. The implications of consumer preferences at the farm level. Introduction to hedging, futures, and other risk management tools.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGB-303 Agriculture Leadership

This course is designed to enhance students' abilities in the area of leadership. The course includes activities that enable students to develop skills in communication, problem solving, committee work, and parliamentary procedure. Students may be involved in many local, state and nationally organized activities.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGB-330 Farm Business Management

Applies business and economic principles of decision making and problem solving in the management of a farm business. Covers cash flow, partial, enterprise, and whole farm budgeting. Reviews information systems for farm accounting, analysis, and control. Examines obtaining and managing land, capital, and labor resources. Provides alternatives for farm business organization and risk management.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGB-331 Entrepreneurship in Agriculture

This course introduces students to basic principles of organizing, financing, and managing a business. Including product merchandising and marketing, personnel management, credits, and risk management.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGB-336 Agricultural Selling

The course teaches the principles of selling with application to agricultural and food related businesses. Reviews attitudes, value systems, and behavioral patterns that relate to agricultural sales. The following concepts will be examined: marketing, selling strategies, preparing for sales calls, making sales presentations, handling objections, and closing sales. The buying or purchasing process will also be analyzed along with evaluating the agri-selling profession.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGC: Agriculture — Comprehensive — Miscellaneous

AGC-103 Ag Computers

This course will introduce students to the hardware, software, word processing, presentation, database and spreadsheet programs. Applications of various agricultural management uses are covered throughout. Online applications and resources are also introduced.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGC-999 Study Abroad

This course explores relative differences between the student's country and another country with emphasis in discipline of study. Topics include history, geography, culture, food, language, and discipline specific topics. This course can be repeated with different content for credit. This course may be taken for 1 – 5 credits.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

AGH: Agriculture — Horticulture

AGH-107 Horticulture Lab

Horticulture lab offers students the opportunity to work in the Hawkeye horticulture laboratory under the supervision of an instructor. Students will be assigned projects and will be responsible for completing them on a timely basis for a limited time. This course may be repeated up to three times with different content.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

AGH-108 Horticulture Safety

The Horticulture safety course will provide students with the knowledge to recognize safe working practices in the horticulture industry. Outline the standards and expectations required to work safely in the numerous occupations of the horticulture industry. The course will introduce students to the national OSHA safety standards for General Construction and upon their completion of this course will receive the OSHA 10 hour General Construction certification.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

AGH-112 Introduction to Turfgrass Management

The course introduces the students to the field of Turfgrass Science. Applying the principles and practices involved in successful maintenance of turfgrass areas will be presented.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

AGH-140 Equipment Operations

This course introduces the general care and use of horticultural equipment in turf and landscape maintenance, and construction. Emphasis is on operation, preventative maintenance performed by the operator, daily lubrications and minor adjustments. Students will also mount and dismount accessories used on the equipment. Safe operation of machinery is emphasized.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

AGH-142 Landscape Construction

Principles and practices of landscape construction will be explained. Curriculum encompasses process from initial client contact to installation of plant material and hardscape. Laboratory work in the course involves landscape installation using various materials and techniques.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGH-143 Equipment Repair

This course is an introduction to basic maintenance of mechanical, hydraulic, and electrical systems of gasoline and diesel engines. Maintenance, up-keep and repair techniques on reel mowers, rotary mowers, and other horticulture equipment are covered.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGH-161 Irrigation Systems

This course presents various types of irrigation equipment: heads, valves, controllers, pipe, and the accessories used in an irrigation system. The course presents the function of water, its relationships to plants and soil, and an introduction to water hydraulics.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGH-200 Landscape Estimating and Bidding

This course focuses on the fundamentals of creating a landscape project estimate including material take-offs, plant pricing, labor rates, measuring, reading landscape plans and math calculations.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

AGH-211 Advanced Turfgrass Management

The course provides opportunities for students to learn techniques of golf course management and operation. Proper construction of specific golf course areas such as: greens, tees, bunkers, basic golf course design is presented. Budgets, irrigation, maintenance and an integrated pest management program are presented.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

AGH-221 Principles of Horticulture

The course provides an introduction to horticulture covering the basic knowledge and skills associated with growth and development of plants including fruits, vegetables, turfgrass, and ornamentals.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

AGH-248 Identifying Plant and Landscape Problems

This course will cover common insect, disease, and weed identification in various landscape applications along with environmental problems. Techniques for problem identification and finding the tools needed to reach a solution will be a major focus. Strategies such as integrated pest management and chemical treatment will be covered.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGH-400 Athletic Field Maintenance

Studies specific sport facilities utilizing turf grasses including football, soccer, field hockey, baseball, and softball fields. Techniques of operation, management, maintenance, budgets, construction, and irrigation will be covered.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGH-425 Grounds Maintenance

This course introduced basic maintenance practices used on a golf course; golf course etiquette, procedures such as top dressing, aerifying, mowing, verticutting, fertilizing, watering, and changing cups on a green. Introduces maintenance practices used in sports complexes, parks and recreation areas, and commercial and industrial grounds.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGH-431 Maintaining Turf and Landscape Equipment

This course covers the fundamentals of turf grass and equipment maintenance including shop layout and maintenance scheduling. Practical applications will be covered involving routine and scheduled maintenance of specialty equipment along with practices such as bearing replacement and reel grinding.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGH-912 Current Topics in Hort.

This is a capstone course for the Horticulture program. This course provides an overview of current and potential future trends in the green industry. Case studies will be investigated.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

AGM: Agriculture — Mechanics

AGM-104 Electricity

This course is an in-depth study of theory in the diagnosing and repair of electrical components and circuitry.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AGM-111 Gas Engine Rebuild

This course covers the theory of gas engines and the construction, diagnosis, and repair of all the systems. Fuel, ignition, and supportive systems are also included.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AGM-119 Hydraulics I

This course covers theory and symbols of hydraulic components. Testing and repair of components is performed according to manufacturers' specifications.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): Minimum grade of C- in AGM-124

Course Type: Technical

AGM-124 Technical Procedures for Power Mechanics Techs

Identifies the general knowledge and procedures used by power technicians. Covers tool selection, general shop safety, fire safety and forklift operation.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

AGM-126 Diesel Engine Sub Systems

A study of diesel fuel systems, air intake systems, cooling systems and exhaust systems.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): Must be an Electronic Engineering Technology with a Mechanical Emphasis student. A minimum grade of D- in EGT-144.

Course Type: Technical

AGM-128 Fundamentals of Diesel Engine

Students are introduced to diesel engine application, design, construction, theory and operating principles of diesel engines. This course also covers diagnosis, disassembly, and assembly of diesel engines.

Credit Hours: 5 Lecture Hours: 16 Lab Hours: 128

Prerequisite(s): Must be an Electronic Engineering Technology with a Mechanical Emphasis student. A minimum grade of D- in EGT-144.

Course Type: Technical

AGM-142 Diesel Power Transfer Systems

Students are introduced to application, design, construction, theory and operating principles of transmission, differentials and final drives.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): Must be an Electronic Engineering Technology with a Mechanical Emphasis student. A minimum grade of D- in EGT-144.

Course Type: Technical

AGM-224 Hydraulics II

This course covers theory and symbols of hydraulic systems. Testing and repair of hydraulic systems is performed with the use of meters and gauges for proper diagnosis.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): A minimum grade of C- in AGM-333.

Pre/Co-requisite(s): A minimum grade of C- in AGM-119.

Course Type: Technical

AGM-333 Electronics

This course is a continuing study of electricity in electronic components covering circuitry, diagnosis, and repair.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of C- in AGM-124.

Pre/Co-requisite(s): A minimum grade of C- in AGM-104.

Course Type: Technical

AGM-401 Ag Power Transfer Systems

A study of the Ag power train from the clutch through the rear driving axles. Emphasis is placed on clutch types, transmissions, and drive axles. Key goals of the course are failure analysis and troubleshooting malfunctions.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): Minimum grade of C- in AGM-119, AGM-104, AGM-124, AGM-333, and AGM-224

Course Type: Technical

AGM-402 Equipment Repair II

This course is designed to give students the opportunity to apply competencies previously achieved to repair and service projects.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Pre/Co-requisite(s): Minimum grade of C- in AGM-401 and DSL-404

Course Type: Technical

AGP: Agriculture — Precision Ag

AGP-333 Precision Farming Systems

Provides an overview of precision farming concepts and the tools of precision farming (GPS, GIS and VRT). Introduces the use of each of these tools within the processes of a precision farming system. Provides hands-on activities in the use of these tools. Discusses economic and environmental benefits.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGP-340 Foundations of GIS and GPS

This course will introduce fundamental processes of Global Positioning System (GPS) including technical aspects of the GPS satellites, differential correction, and hardware. The specific application of this technology for mapping, navigation, variable rate technology (VRT), and data collection will be discussed and demonstrated. Fundamental processes of Geographic Information Systems (GIS) will also be introduced, including file formats, data base management, spatial analysis and manipulation of data.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGP-436 Advanced Precision Farming: Hardware

Examine the installation, operation, and troubleshooting of precision farming hardware components. Install equipment and various components used within precision agriculture and operate various precision agriculture hardware systems and technologies. Trouble shoot and diagnose various problems on precision hardware technologies. Justify and examine the cost and benefits of various precision hardware technologies.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGP-450 Fundamentals of GIS

Fundamental processes of Geographic Information Systems (GIS) with emphasis in its application to agriculture will be covered. File formats, data base management, spatial analysis, and manipulation of data will be covered thoroughly. Comparisons of GIS and mapping software, and conversions between formats will also be discussed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGS: Agriculture — Science, Animal

AGS-113 Survey of the Animal Industry

This course introduces students to the species and breeds of domestic livestock and development of an appreciation for the principles of livestock production, and issues facing product marketing. Topics include: breeds, basic management and marketing of farm animals, composition, evaluation and marketing of farm animals, composition, evaluation and marketing of animal products; including beef and dairy cattle, horses, goats, poultry, sheep and swine.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGS-211 Issues Facing Animal Science

Overview of the factors that define contemporary ethical and scientifically based issues facing the animal industry.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

AGS-216 Equine Science

This course presents the basic management and production practices for horses including nutrition, health care, reproductive management, facilities and evaluation.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGS-218 Domestic Animal Physiology

Introduction to the functional anatomy and physiological activities governing the animal body; including cells, senses, nerves, skeletal, circulatory, respiratory, digestive, urinary, muscular, reproductive, and endocrinology.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in AGS-113.

Course Type: Technical

AGS-225 Swine Science

Introduces principles, practices, and decisions impacting swine production.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGS-226 Beef Cattle Science

This course will introduce the principles, practices, and decisions impacting beef cattle production.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGS-272 Foods of Animal Origin

An introduction to contemporary practices in the meat industry with a focus on production, processing and preservation of safe, wholesome, nutritious and palatable animal derived products.

Credit Hours: 5 Lecture Hours: 64 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in AGS-113.

Course Type: Technical

AGS-275 Food Safety and Analysis

An introduction to food quality control/assurance and establishment of decision-making processes, looking at potential hazards in the food system along with ways to ensure safety of products. The 3 modules of this course will be 1) Food hazards 2) HACCP (Hazard Analysis Critical Control Points) and 3) Analysis for potential contamination.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGS-305 Livestock Evaluation

This course develops the student's potential in livestock selection with emphasis placed on the evaluation of breeding animal as well as market animals.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGS-319 Animal Nutrition

Examines the nutritional principles, digestive systems, composition, and nutritional characteristics of common feedstuffs, ration formulation, and recommended animal feeding programs.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGS-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

AGT: Agriculture — Technology

AGT-700 Special Topics: Agriculture Education

This course is designed for career and technical education professionals to develop and enhance knowledge and skills in specific emerging practices, issues, and technical content areas in the broad industry of agriculture.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

AGT-805 Employment Experience

This course provides students with opportunities to gain on-the-job experience in the agriculture, natural resource or horticulture industries. Students will gain an understanding of qualities and skills needed for success. Coordination and guidance will be provided by department instructors.

Credit Hours: 5 Co-op Hours: 320

Course Type: Technical

AGT-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content.

May be taken for up to 5 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

AGV: Agriculture — Vet Technology

AGV-101 Veterinary Assisting

This is a capstone course that will provide students with the necessary skills and competencies that are needed to successfully perform the duties of a veterinary assistant.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in AGV-154 or instructor approval.

Course Type: Technical

AGV-121 Veterinary Medical Terminology

This class focuses on reading and interpreting medical charts and records, and conversing with veterinary professionals. It is designed for students to develop a working understanding of the language of veterinary medicine.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

AGV-123 Companion Animal

This course provides an understanding of the basic principles of anatomy and physiology and health of companion animals. Additionally, the course will offer insight into social behavior and relationships.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

AGV-140 Veterinary Pharmacology

This class introduces the student to small animal pharmaceuticals. Learning is centered on the use, dosage, administration, handling, and storage of commonly used drugs used in small and large animal veterinary practices.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in AGS-218.

Course Type: Technical

AGV-154 Veterinary Reception and Administration Skills

This course will cover all aspects of record keeping, reception, and administration skills required in a veterinary hospital. Furthermore, students will become familiarized with a computer software used in a veterinary practice.

Credit Hours: 4 Lecture Hours: 64

Course Type: Technical

ART: Art

ART-101 Art Appreciation

This course is an examination of the value, esthetic pleasures, structure, function, and history of art. The course explores sculpture, painting, film, drawing, printmaking, photography, ceramics, and architecture. Field trips to galleries allow students the opportunity to personally experience significant visual art.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

ART-120 2-D Design

This course introduces students to the principles of design on the two-dimensional plane. Students are instructed in conceptual thinking, content and art practices, and exposed to design, color theory, and organizational principals. An introduction to materials and practice through the disciplines of drawing, painting, printmaking and collage are part of the conceptualization process offered in this curriculum.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: General Education / Transfer

ART-123 3-D Design

This course introduces students to the principles of design on the three-dimensional plane. Students are instructed in conceptual thinking, content and art practices, and exposed to the elements of art/design and organizational principles through the utilization of space. An introduction to materials and practice through the disciplines of drawing, designing and drafting are part of the conceptualization process offered in this curriculum.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: General Education / Transfer

ART-133 Drawing

This course concentrates on fundamental drawing problems: gesture, contour, proportions, mapping techniques and values are studied through the use of props and clothed models. Creative interpretation with various media and approaches are stressed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: General Education / Transfer

ART-134 Drawing II

This course concentrates on more advanced drawing problems: gesture, contour,proportions,mapping techniques and value are studied through the use of props and clothed models addressed in Drawing 1. The focus will be more creative interpretation with various media and approaches.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: General Education / Transfer

ART-143 Painting

This course is an introduction to painting in a variety of media. Color theory, design theory and media area applied to exercises, studies, and finished paintings. Concentration is on developing skills in handling materials and personal expression through painting.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: General Education / Transfer

ART-144 Painting II

This course is an advanced painting course using a variety of media, with greater emphasis on self-direction. Concentration is on developing advanced skills in handling materials leading to greater abilities and personal expression through painting.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): ART-143, equivalent, or instructor approval.

Course Type: General Education / Transfer

ART-173 Ceramics

A hands-on intensive introduction to clay and glaze materials, integrated with a fresh approach to building interesting forms effectively.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: General Education / Transfer

ART-174 Ceramics II

This course develops the methods of clay forming as a means of expression. Topics may include hand building, wheel-throwing, glazing, design and the functional and aesthetic aspects of ceramics. Upon completion, students should demonstrate improved craftsmanship and aesthetic quality in the production of ceramic art.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in ART-173.

Course Type: General Education / Transfer

ART-184 Photography

This course provides an introduction to the basics of digital photography, from camera selection to its use as an art form and aesthetic medium. Content includes camera types, lenses, exposure controls, elements of composition, editing fundamentals, and the storage, printing and sharing of photographic images. It will also examine the elements of photographic theory, history and ethics. In this hands-on class, students will complete specific technique-based assignments and participate in class demonstrations, discussions and critiques.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: General Education / Transfer

ART-203 Art History I

This course is an introduction to the history of visual art and artists; prehistory through Gothic. All forms of media: painting, sculpture, drawing, architecture, ceramics, metal work, glass and others are considered in the context of time, society, and the human impulse to create.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

ART-204 Art History II

This course is an introduction to the history of visual art and artists; Renaissance to the present. All forms of media: painting, sculpture, drawing, architecture, ceramics, metal work, glass, photography, film, and others are considered in the context of time, society, and the human impulse to create.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

ART-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This class may be taken for up to 3 credits.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ART-928 Independent Study

This course provides students with an opportunity to explore a topic, medium, or project of interest that is outside the regular course offerings. Faculty consultation is required prior to registration for this course. This course can be repeated with different content for credit. This course can be taken for 1–5 credit hours.

May be taken for up to 5 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ART-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ART-999 Study Abroad

This course explores relative differences between the student's country and another country with emphasis in discipline of study. Topics include history, geography, culture, food, language, and discipline specific topics. This course can be repeated with different content for credit. This course can be taken for up to 5 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ASL: American Sign Language

ASL-131 American Sign Language I

This course will introduce the student to American Sign Language (ASL) and the primary users of this visual-gesture language, the American Deaf Community. This course will cover vocabulary and grammar by using ASL expressive and receptive skills. This course will be taught by the immersion method, using ASL exclusively after the first class lecture.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

ATR: Automation Technology and Robotics

ATR-145 Applied Industrial Robotics

This course will introduce the study of industrial robots. This hands-on course will equip students with the skills for the installation, programming, and troubleshooting of industrial robots.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

AUT: Automotive Technology

AUT-106 Introduction to Automotive Technology

This introductory course provides an introduction to the many facets of the automotive industry to include: careers in the automotive industry, environmental concerns affecting the automotive industry, basic automotive hand tools, specialty tools, precision measuring tools, power tools and shop equipment, using service and shop manuals, and shop safety.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

AUT-109 Introduction to Automotive Technology II

This course includes the use of hand and power tools, the understanding of electronic repair information and the importance of preventative maintenance.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

AUT-164 Automotive Engine Repair

Basic theory of two-cycle and four-cycle gasoline engines and their application will be introduced. Disassembly, inspection and reassembly of an engine will be experienced as well as cooling, lubrication, induction, exhaust, compression and valve systems discussed. Students will develop competencies in precision measuring and services procedures.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-204 Automotive Automatic Transmissions and Transaxles

This course covers the advanced study of automatic transmission theory and service. The student will review basic automatic transmission theory. The student will study diagnosis, disassembly, inspection, and assembly of different types of automatic transmissions and trans-axles.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-307 Automotive Manual Transmissions and Transaxles

A comprehensive study of the Manual Transmissions/Transaxle components and their relationship to the application of power to the drive wheels of vehicles.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-315 Automotive Differentials and 4-Wheel Drive

A comprehensive study of Differentials and Transfer Cases and their relationship to the application of power to the drive wheels of vehicles.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-404 Automotive Suspension and Steering

Steering and suspension system operation and service procedures are covered. Emphasis is on diagnosis and repair procedures.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-504 Automotive Brake Systems

Instruction in the theory and operating principles of drum, disc, hydraulic, and anti-lock brake systems. Laboratory procedures for inspecting, testing, diagnosing, repairing, and/or replacing conventional, power brake system components.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-537 Automotive Advanced Brake Systems

This course explains antilock brake systems. It also covers the diagnosis and repair of this system, as well as traction and stability control.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-610 Automotive Electrical I

This introductory course covers basic electronic theory and utilization of electrical measuring instruments. Emphasis will be placed on the application of Ohm’s Law and the proper utilization of electronic test equipment including practice with equipment and circuits.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-631 Automotive Electronics

This course includes the theory of automotive electronics, communication of automotive electronics and repair of electronic systems.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-643 Auto Starting, Charging, and Electrical

This course includes automotive electrical theory, electrical components, component operation, testing and repair procedures for automotive charging, starting and electrical systems.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-704 Automotive Heating and Air Conditioning

This course will provide instruction in the theory of operation of auto air conditioning and heating systems. Students will learn how to diagnose and service auto air conditioning systems and heating systems.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-827 Automotive Ignition Systems

Operation, diagnosis, and repair procedures used to service the modern automotive ignition system.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): A minimum grade of D- in AUT-842.

Course Type: Technical

AUT-834 Automotive Fuel Systems

This course will provide the instruction to introduce the student to basic fuel system principles. Students will study theory and will gain hands-on experience by cleaning, repairing, and adjusting automotive fuel systems.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-842 Automotive Computerized Engine Controls

This course builds upon the knowledge and skills learned in previous automotive courses to prepare the student to service On-Board Diagnosis 2 computer-controlled vehicles. The theory and operating principles of automotive computers, sensors and control devices will be emphasized. Lab instruction on late model cars will be included.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

AUT-886 Comprehensive Application

Students are presented with diagnostic problems and repair projects. Competencies attained in prior classes are emphasized.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): A minimum grade of D- in AUT-106, AUT-109, AUT-164, AUT-610I, AUT-504, AUT-643I, and AUT-307.

Course Type: Technical

BCA: Business Computer Application

BCA-132 Electronic Communications

An introductory course in electronic communications designed to provide the students with a basic understanding of electronic mail, presentation software, and desktop publishing software. Students will be given hands-on experience with the software.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

BCA-183 Basic Web Design Software

This course will show students how to use a web authoring software to enhance and manage professional quality web sites. Students will create a web site containing multimedia elements, publish it, and maintain it.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): WDV-102.

Course Type: Technical

BCA-205 Database/Spreadsheets

This course emphasizes file management and learning to generate and format spreadsheets and databases. File management tasks include managing folders and moving, copying and deleting files. Spreadsheet tasks include making entries, correcting entries, entering formulas and creating charts. Database tasks include designing and creating tables, generating queries, creating forms and reports, and database maintenance. Basic computer literacy is expected of students enrolling in this course.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in RDG-039 or appropriate math placement score.

Co-requisite(s): Ability to type 15 net WPM on a five-minute timing. Test will be given on the first day of class.

Course Type: Technical

BCA-213 Intermediate Computer Business Applications

This course covers advanced computer applications including word processing, spreadsheet, database, and presentation software. Topics include using mail merge, desktop publishing, using database functions in a spreadsheet, templates, creating customized reports and forms in database, advanced features of presentation software, importing and exporting data.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in BCA-205, CSC-110, or CSC-116.

Course Type: Technical

BCA-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

BIO: Biology

BIO-105 Introductory Biology

This course provides an introduction to living organisms, their diversity, structure and function and how they maintain themselves both during their life cycle and as a species. It is designed to highlight concepts of the biological sciences for the non-biology major.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: General Education / Transfer

BIO-112 General Biology I

This lecture and laboratory course is the first of a two semester sequence designed for students with a specific interest in majoring in the biological sciences or a desire for a more comprehensive undergraduate course in the discipline. The course integrates the basic principles of general biology and focuses on their interrelationships. The major themes addressed include levels of organization, cell structure and metabolism, the genetic basis of life, evolution, diversity and ecological relationships. Laboratory exercises are coordinated with lecture topics to enhance the student's understanding of these topics.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: General Education / Transfer

BIO-113 General Biology II

This lecture and laboratory course is part of a two semester sequence designed for students with a specific interest in majoring in the biological sciences or a desire for a more comprehensive undergraduate course in the discipline. The major focus of this course is on the diversity of life forms, including microbes, protists, the fungi, plants and animals. The course will include the study of their structure and function, evolutionary patterns, ecological relationships and behavior. Laboratory exercises are coordinated with lecture topics to enhance the student's understanding of the lecture concepts.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: General Education / Transfer

BIO-151 Nutrition

Principles of Nutrition will introduce students to the science of nutrition. The course will examine individual nutrients; their structure and function in the human body; nutrient composition of food; and selection of food to meet nutrient needs, maintain health and satisfaction. Students will understand and apply present day knowledge of nutrition to dietary patterns and needs of selected individuals and groups. The course is an advanced beginning course in human nutrition designed for students with a science background.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

BIO-154 Human Biology

Human Biology explores human structure and function and the relationship of humans to other living organisms. The course examines the application of basic biological principles to practical human concerns. The course is a one-semester biology course intended for students who do not wish to major in the biological or health sciences.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

BIO-163 Essentials of Anatomy and Physiology

An introduction to the principles of human anatomy and physiology beginning with the cellular/biochemical level of organization and progressing through a comprehensive study of organ systems emphasizing homeostasis. This is a one-term transfer level class designed for students entering allied health fields or biological sciences. Each student must enroll for one laboratory section.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: General Education / Transfer

BIO-166 Fundamentals of Anatomy and Physiology

This introductory course provides an overview of basic anatomy and physiology of all body systems. It is designed primarily for the non-professional majors as an introductory course. Laboratory includes microscopy, the study of human anatomy, computer simulations, preserved specimens and the study of physiological processes.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: General Education / Transfer

BIO-168 Human Anatomy and Physiology I

The first of a two-semester sequence especially designed for students pursuing careers in allied health fields as well as any student desiring an in-depth undergraduate transfer course. The course focuses on the interdependent relationships between the structure and functions of body systems and the ways these parts interact (homeostasis) to insure the survival of the organism. Major topics addressed include levels of organization, the chemistry of life, support/movement, integration/control, and coordination. Coordinated laboratory exercises focus on anatomical knowledge and physiological functions.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: General Education / Transfer

BIO-173 Human Anatomy and Physiology II

The second of a two-semester sequence designed for students pursuing careers in allied health fields or wishing an in-depth undergraduate transfer course in the biological sciences. The course focuses on interdependent relationships between the structures and functions of body systems and the way these parts interact (homeostasis) to insure survival of the organism. Major topics addressed include systems associated with circulation, maintenance, elimination and continuity. Coordinated laboratory exercises focus on anatomical knowledge and physiological functions.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in BIO-168.

Course Type: General Education / Transfer

BIO-186 Microbiology

Morphology, physiology, taxonomy, and relationship of microorganisms to disease. In-depth laboratory study and suitable lecture material with applications to agriculture, industry, and medicine.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: General Education / Transfer

BIO-269 Foodology

This course explores the physical, biological, and chemical study of food and examines food science by presenting topics relevant to the modern day diet. Topics will include food processing, food distribution, organic foods, genetically modified foods, macro and micronutrients, and the obesity epidemic.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

BIO-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course can be taken for 1–3 credit hours.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

BIO-928 Independent Study

This course provides opportunity for a student to focus previous course work and knowledge on a special issue as well as provide for individualized exploration of topics germane to the student's projected objectives within any recognized discipline. Faculty consultation is required prior to registration for this course. This course can be repeated with different content for credit.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

BIO-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

BUS: Business

BUS-102 Introduction to Business

An introductory survey course which provides an overview of the major functions in business with relation to current social, economic, global, and environmental concerns.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

BUS-108 Business College Experience

This course is designed to orient technical business students to the college campus, business and general resources, college services, and expectations. This course will provide an introduction to career portfolios and certifications

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

BUS-128 Foundation to Entrepreneurship

This course is suitable for anyone who dreams of one day becoming his/her own boss. Students will learn how to identify and evaluate opportunities, analyze feasibility, and plan to create and grow successful businesses. The course provides an overview of entrepreneurship and its importance in society and inspires students to recognize entrepreneurial characteristics within themselves.

Credit Hours: 3 Lecture Hours: 32

Course Type: Technical

BUS-180 Business Ethics

This course is an introduction to ethical decision making in business. There is an examination of individual, organizational, and macrolevel issues in business ethics. This course does not determine correct ethical action; it is designed to assist the potential businessperson to make more informed ethical decisions on a daily basis. Dilemmas, real life situations and cases provide an opportunity for you to use concepts in the assignments and to resolve ethical issues. Since there is no universal agreement on the correct ethical business norms, critical thinking and informed decision making are emphasized.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

BUS-183 Business Law

An introduction to the principles of law as they relate to business. This course includes an overview of our court system, sources of law, ethics and social responsibility, contracts, warranties, real property, landlord and tenant, negotiable instruments, and agency. Emphasis is placed on exploring the law as it affects businesses and individuals.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

BUS-210 Business Statistics

Application and interpretation of probability and statistics as they relate to business problems; design of experiment, descriptive statistics, sampling, estimation, correlation, linear regression, hypothesis testing, and analysis of variances.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): MAT-156 or equivalent or appropriate placement score.

Course Type: General Education / Transfer

BUS-220 Introduction to International Business

This course focuses on marketing management problems, techniques, and strategies needed within the world marketplace. Understanding a country's cultural and environmental impact is emphasized. Worldwide consumerism, economic and social development, the spread of multinational corporations, business ethics, cultural diversity, and current economic and marketing issues will be examined.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

BUS-230 Quantitative Methods for Business Decision Making

Quantitative and qualitative aspects of problem solving and decision making in business are covered. Topics include structuring and the basics of decision making, classification theory, functional relationships, marginal analysis, resource allocation, and probability.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): MAT-156.

Course Type: General Education / Transfer

BUS-295 Workplace Professionalism

This course is designed to prepare students to enter the workplace with the skills required in a professional setting. This course will cover workplace behaviors such as communicating in a professional manner, conflict resolution, accountability, and business etiquette. This course will also cover career development skills.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

BUS-903 Business Field Experience

This course provides students with the opportunity to gain practical work experience, while applying skills and techniques learned in their program of study, under the supervision of an employer, manager, or supervisor.

Credit Hours: 3 Co-op Hours: 192

Prerequisite(s): 2.00 cumulative GPA

Course Type: Technical

BUS-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course may be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

BUS-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

BUS-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

CAD: Computer Aided Drafting

CAD-118 Technical Drawing and CAD

This course will introduce hands-on technical drawing and computer-aided drafting and design. Basic drawing tools and computer hardware, software and file management will be discussed. Basic manual drawing and two-dimensional engineering CAD drawing creation will be covered. Various editing techniques in CAD will be examined. Manual drawings will be created; CAD drawings will be created, edited and plotted.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of D- in CSC-110, or EGT-108, or EGT-410. For non-majors, a student with basic computer proficiency can be enrolled with instructor consent.

Course Type: Technical

CAD-200 CAD SoftPlan

The CAD SoftPlan course will introduce students to an object-based CAD program and the process involved in generating a complete set of residential working drawings. Emphasis will be placed on setting up a drawing, using file management, organizing architectural information, paying attention to detail, converting sketches to CAD, modifying CAD drawings, and applying problem solving skills.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CON-102.

Course Type: Technical

CAD-208 SoftPlan 2

The Softplan 2 Course will introduce students to advanced Softplan skills involved in generating a complete set of residential working drawings. Emphasis will be placed on advance organization of architectural information, attention to detail, modifying CAD drawings, and applying problem-solving skills.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CAD-200.

Course Type: Technical

CET: Civil Engineering Technology

CET-123 Constr Drawings and Cont

The course examines typical building and civil construction (highway) plans and introduces the methods of bidding and contracting for various types of building projects.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Non-majors may enroll with instructor consent.

Course Type: Technical

CET-133 Construction Methods and Resources

Methods of and problems related to construction of highways and buildings are covered. Examination is done of the commonly utilized resources - money, materials, equipment, personnel - and their management. Production and handling costs are discussed. Productivity, construction scheduling and construction safety are also covered briefly.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Pre/Co-requisite(s): A minimum grade of D- in MAT-741 or MAT-121.

Course Type: Technical

CET-142 PC Concrete, HMA, and Testing

This course covers types, production, and physical properties of asphalt and portland cements, testing and selection of mineral aggregates and concrete mix designs, laboratory testing procedures of mix evaluation and quality control methods for asphalt and portland cement concretes.

Instructor consent if not in program major.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

CET-160 Surveying

Surveying includes the use of surveying instruments and note-keeping for level circuits, topographic surveys, traversing, and construction surveys. Computations to determine errors, distances, azimuths, bearings, angles, areas, volumes, and topics in photogrammetry are included.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of D- in MAT-741 or MAT-121 or instructor consent.

Course Type: Technical

CET-183 Structural Detailing and Civil Drafting

Structural Detailing uses computer-aided drafting (CAD) techniques to prepare drawings for sites and highway structures which include structural steel, reinforced concrete and structural timber. Course introduces the preparation of bar bend details, reinforcing bar lists, and quantity calculations for various types of projects. Topics from the Department of Transportation Highway and Bridge Standard Specifications are also covered.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in CAD-118 or instructor consent.

Course Type: Technical

CET-213 Route Surveying/Roadway Design

Route surveying covers horizontal and vertical curves (circular, parabolic, and spiral), earthwork, and elements of safety and photogrammetric applications. Fieldwork includes surveying for a grading project and drafting the plan and profile, cross-sections, and calculating and balancing earth volumes. Roadway design incorporates the use of a computer-aided roadway design software package and includes topographic mapping, highway design, and plotting project drawings.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): Minimum grade of D- in CET-160.

Course Type: Technical

CET-223 Soils, Testing, and Foundations

Students study the origin, structure, identification, and engineering classification of soils, moisture-density relationships, standard laboratory testing procedures, compressive and shearing strength of soil and bearing capacity of soils and piling.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of D- in MAT-741 or MAT-121.

Course Type: Technical

CET-233 Fundamentals of GPS and GIS

This course will introduce fundamental processes of Global Positioning Systems (GPS) including technical aspects of GPS satellites, differential corrections and hardware. The specific application for mapping and data collection will be discussed and demonstrated. Fundamental processes and applications of Geographic Information Systems (GIS) will also be introduced, including file formats, data base management, spatial analysis and manipulation of data.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): CET-160.

Course Type: Technical

CET-253 Fundamentals of Construction Estimating

Students learn the fundamental principles of construction estimating. The course stresses the organization of the estimate, the procedure of estimating costs in different divisions of the project and determining the critical quantities of materials obtained from a set of plans.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Pre/Co-requisite(s): A minimum grade of D- in MAT-063 or equivalent placement score.

Course Type: Technical

CET-256 Land Surveying

This course covers topics of the U.S. Public Land Survey System, Iowa laws regarding surveying and the preparation and recording of plats. Fieldwork is required to collect boundary measurements and field astronomy for a North azimuth. Calculations include astronomical bearings, traverse adjustment, area and partition of land. Computer drafting is used in the preparation of the plat.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in CET-160.

Course Type: Technical

CET-262 Environmental Technology

Topics covered include hydraulics, hydrology, water quality, water and sewer systems, storm water control, solid and hazardous waste, and air and noise pollution.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in MAT-121 or MAT-741.

Course Type: Technical

CET-285 Structural Steel/Reinforced Concrete Design

Structural Steel Design covers the design of beams, columns, bolted and welded connections, base and bearing plates, and tension members. Reinforced Concrete Design covers the strength and behavior of reinforced concrete in the design of such structural members as beams, slabs, walls, columns, and footings.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): EGT-243

Course Type: Technical

CET-296 Site Planning and Development

The course will examine procedures for developing site plans for main types of construction projects. Various aspects of the development of a job site will be examined by considering feasibility studies, zoning requirements, site survey and design, required permits and other pertinent information. The general outline of the policies used by local municipalities will be used as examples.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in CAD-118, EGT-460, and CET-123.

Pre/Co-requisite(s): A minimum grade of D- in CET-213 and CET-262.

Course Type: Technical

CHM: Chemistry

CHM-122 Introduction to General Chemistry

An introductory course which assumes a minimal student background in mathematics and chemistry. The course is intended to serve students in allied health programs and any student desiring an application-oriented, less theoretical approach to chemistry. The course introduces students to the practical aspects and basic concepts of chemistry including measurements, dimensional analysis, matter, energy, atoms, elements, the Periodic Chart, nuclear chemistry, chemical bonding, nomenclature, an introduction to organic chemistry, chemical quantities, formulas, gases, chemical calculations, balancing equations, solutions, acids and bases, chemical kinetics, and equilibrium. Coordinated laboratory exercises are intended to emphasize topics covered in the lecture as well as stress basic laboratory techniques. Elementary algebra is required as a prerequisite.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in MAT-063.

Course Type: General Education / Transfer

CHM-132 Introduction to Organic and Biochemistry

This lecture-laboratory course is intended primarily to serve undergraduate health-related majors such as nursing and dental hygiene as well as the general studies students seeking an integrated background in organic and biological chemistry. Students will study topics applications from a clinical, human or environmental perspective. Laboratory exercises are coordinated with the lecture topics.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): CHM-122.

Course Type: General Education / Transfer

CHM-165 General Chemistry I

This lecture and laboratory course is the first of a two-semester sequence designed specifically for students majoring in chemistry, physics, biology, or pre-engineering. It is a mathematically rigorous course that assumes the entering student has a strong background in algebra and finite mathematics. Students will learn specific-content chemical information that will be applied within the context of a variety of chemistry applications. Many of the applications that will be investigated highlight contemporary social and scientific issues. Through participation in course activities, each student should expect to improve her/his knowledge of chemistry and to develop improved qualitative and quantitative problem-solving skills. Hands-on experience with laboratory experiments will allow students to learn proper procedures, to gather meaningful data, and to draw logical and appropriate conclusions based on the laboratory data. Content will include chemical equations, stoichiometry, gases, thermochemistry, equilibrium, electronic structure of atoms, periodic trends, molecular bonding and structure, intermolecular forces, and nuclear chemistry.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in MAT-102, MAT-110, or MAT-156.

Course Type: General Education / Transfer

CHM-175 General Chemistry II

This lecture and laboratory course is the second of a two semester sequence designed specifically for students majoring in chemistry, physics, biology or pre-engineering. Students will have successfully completed General Chemistry I or its' equivalent. The course focuses on chemical equilibria and their applications, thermodynamics, kinetics, modern materials, electrochemistry, properties of solutions, chemistry of the representative main group and transition elements, coordination compounds, basic organic chemistry, biological chemistry, and chemistry of the environment. Specific topics are outlined under the course content. Laboratory exercises are coordinated with lecture topics where possible, and are intended to augment and support these topics.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): CHM-165.

Course Type: General Education / Transfer

CHM-260 Organic Chemistry I

Theory and practice of organic chemistry with emphasis on the chemistry of functional groups, structure, bonding, molecular properties, reactivity and nomenclature of alkanes, alkenes, alcohols and ethers, stereochemistry, reaction mechanism, nucleophilic substitution and elimination reactions.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in CHM-165 and CHM-175.

Course Type: General Education / Transfer

CHM-270 Organic Chemistry II

Theory and practice of organic chemistry with emphasis on nomenclature and reactivity of alkenes, alkynes, aromatics, aldehydes, ketones, carboxylic acids and their derivatives, amines, and polyfunctional compounds.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Minimum grade of C- in CHM-260 or equivalent.

Course Type: General Education / Transfer

CHM-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

CHM-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content.

May be taken for up to 5 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

CHM-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

CIS: Computer Programming

CIS-102 Introduction to Computers

This course introduces the basic use of the personal computer. The course includes a study of DOS (disk operating system), Windows, and word processing.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

CIS-121 Introduction to Programming Logic

This course will introduce language independent programming logic design techniques. Students will learn techniques such as flow-charting and pseudo-code to build complete programs that can be translated into modern programming languages. Students will learn to use elements of decision making, looping, control breaks, and arrays. Language independent Object Oriented Programming will be introduced along with other advanced topics.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

CIS-152 Data Structures

This course provides a strong foundation in commonly used data structures, including collections, linked lists, stacks, queues, trees, maps and heaps, etc. Students will use an object-oriented programming language to design, write, and test medium-sized programs that implement data structures.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C- in CIS-121.

Course Type: Technical

CIS-169 C#

This course is an introduction to the C# language. Object-oriented programs will be developed by students.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C- in CIS-121.

Course Type: Technical

CIS-174 Advanced C# Programming

Students learn ASP.NET development with C# and relational database management systems and build dynamic websites, web applications and XML web services. The course includes advanced topics, such as state preservation techniques and object-oriented programming. After completing the course, students will be able to use C# and ASP.NET to build professional-quality database-driven websites.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Pre/Co-requisite(s): Minimum grade of C- in CIS-169.

Course Type: Technical

CIS-184 Programming Algorithms

This course surveys computer algorithms every programmer should know. This course will also explore common design patterns.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CIS-217 and CIS-225.

Course Type: Technical

CIS-206 Web Scripting

This course is designed to give students experience in creating dynamic web sites. Students will use JavaScript to add interactivity to web sites. Students will explore the Document Object Model as well as other advanced techniques.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CIS-121, CIS-215, or CIS-231.

Course Type: Technical

CIS-215 Server Side Web Programming

This course is designed to give the student the tools and the knowledge to program web applications using the web programming language ASP.NET C# as a server side language. This course goes over the syntax and usage of the language. This course will introduce the basics of web applications.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in WDV-102 and CIS-121.

Course Type: Technical

CIS-217 Data Driven Web Page

This course is designed to give the student the tools and the knowledge to program a web application using PHP and MySQL. This course covers advanced topics such as administration pages for the web site for the management of the web application. This course is a continuation of CIS-231 PHP Programming.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CIS-231.

Course Type: Technical

CIS-225 Advanced Server Side Web Programming

This course will build on the skills learned from Server Side Web Programming. This course will work with advanced topics in Active Server Pages. Students will be expected to create entire web sites using information learned in this course. A practical hands-on approach will be utilized.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in CIS-215.

Course Type: Technical

CIS-231 PHP Programming

This course is designed to give the student the tools and the knowledge to program using the web programming language PHP as a server side language. This course goes over the syntax and usage of the language. This course will introduce the basics of web applications.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in WDV-102, CIS-121, and CIS-355.

Course Type: Technical

CIS-234 Web Site Administration

This course is designed to introduce students to the various platforms that support the servicing web sites. Students will understand HTTP, FTP and SMTP and configure the services. Students will also host and maintain several websites on a server.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): WDV-102 and minimum grade of C in CIS-231.

Course Type: Technical

CIS-249 Web Languages

This course is designed to give the student an exploration of other web languages used on the web, and learn the basics of those languages.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CIS-121 and WDV-102.

Course Type: Technical

CIS-274 E-Commerce Design

This course will introduce students to using the Internet as a medium for marketing, sales and support of a product. Students will learn how to adapt a traditional business model to an electronic model.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C in CIS-231.

Course Type: Technical

CIS-303 Introduction to Database

This course will introduce students to data management using databases. Multiple DBMS’s will be discussed and utilized to experience similarities and differences. SQL language will be used to create databases, populate tables and query data.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

CIS-355 Database Design and Management

This course will introduce students to data management using databases. this includes database design, normalization/optimization, relationships, security, and database management systems.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: Technical

CIS-364 Game Development I

This course delves into the development of games from idea to prototype to a first stage functional game. A variety of platforms will be explored.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C in CIS-215 and CIS-121.

Course Type: Technical

CIS-440 PLTW—Computer Science Essentials

With emphasis on computational thinking and collaboration, this course provides an excellent entry point for students to begin or continue the PLTW Computer Science experience. This course will expose students to a diverse set of computational thinking concepts, fundamentals, and tools, allowing them to gain understanding and build confidence. Students will use visual, block-based programming and seamlessly transition to text-based programming with computer languages to create apps and develop websites, and learn how to make computers work together to put their design into practice. Students will apply computational thinking practices, build their vocabulary, and collaborate just as computing professionals do to create products that address topics and problems important to them.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64 Clinic Hours: 0 Co-op Hours: 0

Course Type: Technical

CIS-450 PLTW—Computer Science Principles

This course implements the College Board's CS Principles framework. Incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. Projects and problems include app development, visualization of data, cybersecurity, and simulation. The course aligns with CSTA 3B standards.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

CIS-504 Structured Systems Analysis

Course will provide student knowledge in the complete process of systems analysis and design and the steps involved. Actual systems analysis and design lab practices will measure student's understanding. Concepts in Project Management will also be covered.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

CIS-604 Visual Basic

This class will introduce students to creating programs using the Visual Basic language. Students will gain experience in creating applications automating processes using Visual Basic.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

CIS-750 Project Management

This course provides students exposure to project management and its importance to successful Information Technology project implementation. Topics include the triple constraints of project management, project life cycle, cost estimates, motivation theory and team building. Tools and techniques important to project management will also be presented including project selection methods, proposal and planning documents, work breakdowns, network diagrams and critical path analysis.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in NET-313 and NET-213.

Course Type: Technical

CLS: Cultural Studies

CLS-130 African Cultures

This course will explore the development of Sub-Saharan African civilizations from the dawn of humanity to the issues facing the continent today. The first part of the course will look at the indigenous and colonial heritage of Africa. The second part will examine selected aspects of the political, economic, social, religious, environmental, and gender issues and realities facing Africa today. Lastly, it will expose students to significant African contributions and trends in the Fine Arts: literature, cinema, music, and the visual arts.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CLS-141 Middle Eastern History and Culture

This interdisciplinary course will examine the history of the Middle East with particular emphasis on the period since the birth of Islam. The course will also explore the cross-cultural exchanges that ancient Middle Eastern and Islamic civilizations have engaged in with other world civilizations. Among the topics covered in this course are the foundation and development of Islam, the cultural influence and spread of Islamic civilization, the creation and politics of modern nation-states, and emergence of Islamist politics.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CLS-150 Latin American History and Culture

This course will explore the development of Latin American civilization form its ancient origins to the issues facing the region today. The course will look at the indigenous and colonial heritage of the area; examine its shared cultural, literary, economic, social, and political contributions and trends; and look at the history and current issues facing the individual countries or sub-regional groupings.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CLS-160 East Asian Cultures

East Asian Cultures is an interdisciplinary course that will explore the emergence of East Asian civilization, its development and diversification, and its contacts and exchanges with other world civilizations. Primary emphasis is on China. The course will explore the various historical, cultural, religious, philosophical, economic, political, social, demographic and geographic factors that make this such a diverse and dynamic civilization and will also draw comparisons between China and neighboring countries.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CLS-164 Japanese History and Culture

Japanese History and Culture is an interdisciplinary course that will explore the emergence of Japanese civilization, its development, diversification, and its contacts and exchanges with other world civilizations. The course will explore the various historical, cultural, religious, artistic, philosophical, economic, political, social, cultural, demographic, and geographic factors that make Japan such a diverse and dynamic civilization. Emphasis will be placed upon attempting to understand Japanese culture as being both unique and as intimately related to other cultures.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CLS-172 Russian Civilization

Russia’s turbulent past and uncertain present will be discussed in this interdisciplinary course. It will examine the major political, economic, geographic, social, cultural, religious, and other factors that have contributed to the development of Russian civilization. Emphasis will be placed upon understanding Russia as both a unique Eurasian civilization and a part of the global community of nations.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CLS-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

CLS-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content.

Can be taken for up to 5 credit hours.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

CNS: Conservation Technology

CNS-104 Outdoor Recreation II

This course provides an introduction into basic outdoor recreation certifications. The course will provide a way for students to learn about boating safety, first aid, and CPR and gain certification necessary for employment. The course will provide background in the principles of Leave No Trace which are essential for wilderness camping. Additionally, the course will provide an examination of the Fish Iowa curriculum for students to share with others as they progress in their careers.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in RDG-038.

Course Type: Technical

CNS-107 Outdoor Recreation Techniques

This course provides an introduction into basic outdoor recreation techniques commonly utilized by naturalists and conservation professionals to help citizens gain an appreciation of their environment. Recreational techniques will include activities such as canoeing, kayaking, hiking, and backpacking.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

CNS-108 Wildlife Identification

This course will provide information to assist in the identification of common wildlife of Iowa. Wildlife will be identified not only by physical characteristics, but by many other characteristics. Vertebrates, insects, and macroinvertebrates will be covered. Major groups of vertebrates including mammals, birds, fish, reptiles, and amphibians will be studied.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

CNS-109 Wildlife Ecology

This course focuses on the application of wildlife ecology and management techniques. It studies censuring, capture and marking of wildlife. The course includes habitat evaluation, habitat restoration, Iowa game laws, life history studies and the application of wildlife management principles as they relate to important ecological and recreational resources.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in CNS-121.

Course Type: Technical

CNS-110 Equipment Operation and Safety

Equipment Operation and Safety focuses on the operation, maintenance, personal protective equipment, and safety of equipment used in the natural resources field. Labs include the use of equipment ranging from small engines to equipment used for prairie restoration, timber stand improvement, aquatic management, and park management.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

CNS-121 Environmental Conservation

Environmental Conservation is a course that enables students to learn about their environment. Students study about natural ecosystems, interactions within ecosystems, ecological principles and their application, the impact our increasing population has on the environment, the importance and components of a sustainable agriculture, and the environmental issues facing today's world.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

CNS-134 Wildlife Management

This course will provide a foundation in the dynamics of wildlife conservation and management. This course relates the biological concepts of wildlife populations, habitat management, management goals and applications geared toward various forms of wildlife.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in CNS-121.

Co-requisite(s): CNS-106.

Course Type: Technical

CNS-136 Aquatic Management

This course introduces aquatic conservation and management. Basic background on aquatic environments, the ecology of fish, and the characteristics of humans who utilize aquatic resources or indirectly interact with them through land- and water-use activities will be covered.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in CNS-121.

Course Type: Technical

CNS-138 Woodland Management

This course will provide an introduction to woodland management from an ecological management perspective. Management of small properties will be emphasized.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

CNS-143 Fire Management

This course focuses on prescribed burns as a tool in ecosystem management. The use of fire to meet resource management objectives requires definitive and quantified knowledge of physical, biological, and ecological effects of fire on the ecosystem involved. Students will be trained in conducting prescribed burns and will participate as burn crew members.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): CNS-121.

Course Type: Technical

CNS-180 Principles of Interpretation

This course covers the history, objectives, forms, and techniques of interpretation in the settings of county, state, national parks, and zoos. The course will explore the principles of effective communication as they apply to natural resource fields. Conceptual principles for planning interpretive programs and use of effective communication in multi-media delivery systems in outreach campaigns to manage and conserve natural resources are discussed. This course helps students gain the technical competencies of interpretation professionals by presenting and observing nature walks, giving public presentations, creating displays, writing news releases, and taking photographs as interpretative exercises. Students will have the opportunity to complete the National Certified Interpretative Guide exam.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Pre/Co-requisite(s): A minimum grade of D- in CNS-121.

Course Type: Technical

CNS-200 Conservation Biology

Conservation Biology draws together scientists and environmentalists in basic and applied studies of biodiversity. The course will examine the nature of this emerging field, and will survey basic principles of ecology with emphasis on the ecosystem concept and its central role in conservation management. The course will examine biodiversity in detail, evaluate the threats to biodiversity, and examine the processes of extinction that are leading to a biodiversity crisis. Students will be active participants in current conservation projects and will conduct studies of the biological diversity of their community.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in CNS-121.

Course Type: Technical

CNS-204 Native Vegetation

This course provides an introduction to botany, landforms of Iowa, and native plant communities. Emphasis will be on the identification of native plants and differentiation from exotic weed species.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

CNS-205 Advanced Outdoor Recreation Techniques

This course provides a wilderness experience to utilize advanced outdoor recreation techniques during an intense time period (over Labor Day weekend or the equivalent). Techniques utilized include hiking, backpacking, canoeing or kayaking, low impact camping, and others. This wilderness encounter is at a remote location such as the Boundary Waters, Isle Royale, etc. The focus of this experience is to gain leadership skills to guide groups of citizens on basic outdoor recreation adventures to increase their appreciation of their environment such as is done by naturalists and conservation groups by following the 18 points set by the Wilderness Education Association and Leave No Trace Principles. This course can be repeated with different content for credit.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): CNS-107.

Course Type: Technical

CNS-228 Natural Areas Management

This course provides a background in the restoration of native ecosystems. Restoration practices from site analysis, seed and plant selection, and planting techniques; to management by fire, mowing, and weed control are covered. Students will have practical experiences in the reconstruction and management of various ecosystems.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

COM: Communication

COM-140 Introduction to Mass Media

Introduction to Mass Media presents elements of the mass communication process with emphasis on the forms, functions, regulations, and social impact of the various media. This course helps students understand how media influence their lives.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

COM-143 Media Messages: Printed Page

Media Messages: Printed Page focuses on the development of skills needed to access, analyze, evaluate, and produce printed media messages by examining the roles of viewer, producer, text, context, techniques, technologies, and institutions. The combination of COM-143, COM-144, and COM-147 may equate to a 3 credit media literacy course at other institutions.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

COM-144 Media Messages: TV and Movies

Media Messages: TV and Movies focuses on the development of skills needed to access, analyze, evaluate, and produce messages from television and film by examining the roles of viewer, producer, text, context, techniques, technologies, and institutions. The combination of COM-143, COM-144, and COM-147 may equate to a 3 credit media literacy course at other institutions.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

COM-147 Media Messages: World Wide Web

Media Messages: Examining the World Wide Web focuses on the development of skills needed to access, analyze, evaluate, and produce messages accessed through the web by examining the roles of viewer, producer, text, context, techniques, technologies, and institutions. The combination of COM-143, COM-144, and COM-147 may equate to a 3 credit media literacy course at other institutions.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

COM-148 Diversity and the Media

Diversity and the Media presents a historical perspective and current analysis of various minority groups and how the media depicts these groups. This course helps students understand why and how stereotypical media portrayals have been produced and how the under-representation of diversified images affects their knowledge, attitudes, and behaviors toward others.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

COM-151 ETC: Art and Literary Magazine

This course will teach students to produce the annual art and literary magazine, ETC, at Hawkeye Community College. Visual and editorial content will be developed based on themes connected to the institution's "Common Read" book, adopted each academic year.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

COM-152 ETC: Art and Literary Magazine

This course will teach students to produce the annual art and literary magazine, ETC, at Hawkeye Community College. Visual and editorial content will be developed based on themes connected to the institution's "Common Read" book, adopted each academic year.

Credit Hours: 2 Lecture Hours: 32

Course Type: General Education / Transfer

COM-155 Newspaper Production

Newspaper Production presents elements of the news reporting process with emphasis on determining newsworthiness, gathering news, writing and editing stories in journalistic style, and observing legal and ethical responsibilities in the print, broadcast, and electronic media. This course helps students explore how journalists determine what the public needs and wants to know.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

COM-730 Communications

This course presents elements of professional verbal and written communication. In this course, students will go through the real world hypothetical process of locating and applying for a job, then practicing communication skills needed while at work.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

COM-763 Introduction to Professional Writing

This course provides students with an introduction to professional writing; it overviews the role of writing as an important part of many careers, as well as part of an academic discipline. This course explores the issues, theories, resources and career opportunities in professional writing, as well as the use of technology to communicate and produce documents.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): ENG-105

Course Type: General Education / Transfer

COM-781 Written Communication in the Workplace

This course focuses on applying the writing process to job application materials and workplace-related written communication.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in ENG-060 or appropriate placement score.

Course Type: Technical

COM-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

COM-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

COM-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

CON: Construction

CON-102 Introduction to Residential Construction

Students will be introduced to basic residential construction safety, history, terminology, materials, and basic construction techniques. This course will cover basic information and develop manual skills needed to begin construction of a new home.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

CON-108 Construction Safety

The Construction Safety course will provide students with the requirements and expectations required to work safely in the numerous occupations of the construction industry. The course will introduce students to the national OSHA safety standards for General Construction and upon their completion of this course will receive the OSHA 10 hour General Construction certification.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

CON-109 Construction Safety

This course includes the 30 Hour Construction Outreach Program as outlined by the OSHA Voluntary Outreach Program. Areas of study include General Safety and Health Provisions, Occupational Health and Environmental Controls (HAZCOM), job site safety, training requirements and an overview of the 1926 Standards (OSHA rules).

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

CON-113 Construction Printreading

Students examine and study typical working drawings for use in the construction of residential and light commercial projects. Areas of special attention are specifications, plan views, concrete and structural steel construction drawings and details.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

CON-121 Carpentry Fundamentals I

This course will serve as a review and preparation for the National Center for Construction Education and Research (NCCER) Level One Carpentry objectives and performance tasks as defined by NCCER. This will include level one necessary skills for the trade.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): CON-102

Course Type: Technical

CON-124 Construction Estimating I

Students learn the fundamental principles of construction estimating. The course stresses the organization of the estimate, the procedure of estimating costs in different divisions of the project and determining the critical quantities of materials obtained from a set of plans.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): CON-113 and CON-135.

Course Type: Technical

CON-125 Construction Estimating II

This course presents the skills required to organize and prepare an estimate for a construction project. Students examine the procedure and function of a preliminary estimate, the quantity take-off method and the summary sheet, all using the CSI format.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): CON-124 and ARC-175.

Course Type: Technical

CON-130 Concrete Theory

The concrete theory course will provide students with a basic understanding of concrete, and its relationship to residential construction.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

CON-131 Site Layout and Blueprint Reading

The Site Layout & Blueprint Reading course will train students to interpret and use site plans and other working drawings. Students will learn how to interpret construction symbols and building specifications. Students will develop site layouts for various projects utilizing lasers, builder’s levels, and transits using site plans and other working drawings.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

CON-133 Construction Technology Lab

The Construction Technology Laboratory course offers students the opportunity to further develop their skills with hand and power tool operations and to devote more time to hands-on construction projects while improving their skill competencies.

Credit Hours: 4 Lab Hours: 128

Course Type: Technical

CON-140 Concrete Lab

The Concrete Lab course will provide students with hands-on experience in estimating, ordering, forming, working, and finishing concrete.

Credit Hours: 2 Lab Hours: 64

Prerequisite(s): A minimum grade of C in CON-130.

Course Type: Technical

CON-146 Construction Technology Lab 2

The Construction Technology Lab 2 course will provide students with the opportunity to utilize the knowledge gained in previous construction courses with hands-on applications to construction projects. This course will reinforce construction competencies in applied mathematics, site layout, blue print reading, framing, exterior finishing, and building science.

Credit Hours: 3 Lab Hours: 96

Prerequisite(s): CON-133.

Course Type: Technical

CON-201 Framing Techniques and Lab I

The Framing Techniques and Lab 1 course will introduce students to the methods used to layout wall lines and plates, measure and cut all required parts, and assemble a floor deck, walls, roof/ceiling, and stair framing with an emphasis on air sealing and advanced framing techniques.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

CON-217 Exterior Finishing

This course will present the various materials used for residential exterior finishes. Topics will include insulated sheathing, building wraps, drainage planes, shingles, soffits, venting, windows, and exterior doors. Emphasis will be on sustainable construction techniques and building science principles.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

CON-228 Methods of Interior Finishing

In the Methods of Interior Finishing course, students will discuss the theory and history of the residential interior system. The lab portion of this course will focus on gypsum wallboard installation, taping, finishing, texturing, and painting. The gypsum wallboard work will be followed by the installation of pre-hung door units, casing, base molding, custom trim, closet finishes, hardware, and cabinetry. Universal Design and a focus on indoor air quality will be stressed. Custom interior finish packages may be included.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

CON-243 Advanced Framing Techniques

This course will utilize resource efficient advanced framing methods that stress energy efficiency and sustainable design. The "Whole Systems Approach" to residential design and construction will be teamed with Universal Design principles and Optimum Value Engineering techniques.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of C in CON-201.

Course Type: Technical

CON-266 Construction Safety

This course includes the 30-Hour Construction Outreach Program as outlined by the OSHA Voluntary Outreach Program. Areas of study include General Safety and Health Provisions, Occupational Health and Environmental Controls (HAZCOM), job site safety, training requirements and an overview of the 1926 Standards (OSHA rules),with emphasis on developing, implementing and maintaining a comprehensive safety and health program.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

CON-290 Construction Estimating and Project Management

The Construction Estimating and Project Management course will link construction estimating with project management and scheduling.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CON-510.

Course Type: Technical

CON-302 Building Science I

Students will learn building science principles and methods to determine how thermal energy transfer, air infiltration and exfiltration, internal and external air pressures, moisture migration, and durable design strategies apply to today's residential design and construction industry.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

CON-372 Technical Portfolio Design

This course provides students with the writing and research skills necessary to compile a personal portfolio documenting their prior education, occupational training and work experiences.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Must be in program major.

Course Type: Technical

CON-373 Technical Presentations

This course highlights essential skills and provides the opportunity for students to develop expertise in both writing for and making technical presentations.

Credit Hours: 3 Lecture Hours: 48 Lab Hours: 64

Prerequisite(s): Must be in program major.

Course Type: Technical

CON-486 Building Science 2 Sustainable Design

This course builds upon concepts learned in CON-302 Building Science. Students will focus on applying advanced building science concepts to actual design applications.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C in CON-302, MAT-772, or equivalent placement score.

Course Type: Technical

CON-510 Construction Technology Lab 3

The Construction Technology Lab 3 course will provide students with the opportunity to utilize the knowledge they have gained in their previous construction courses with hands-on applications to construction projects. This course will require that students use their knowledge of construction codes and construction documents and computer aided drafting to provide detailed drawings adhering to the International Energy Conservation Code and Universal Design Principles.

Credit Hours: 3 Lab Hours: 96

Prerequisite(s): CON-146

Course Type: Technical

CON-515 Construction Technology Lab 4

The Construction Technology Lab 4 course will provide students with the opportunity to utilize the knowledge they have gained in their previous construction, energy, building science, and design courses with hands-on applications to construction projects. This course will require students to use their knowledge of sustainable construction principles; adhering to the International Energy Conservation Code and Universal Design principles.

Minimum grade of C in CON-510

Credit Hours: 4 Lecture Hours: 0 Lab Hours: 128

Course Type: Technical

CON-933 Employment Training Experience

This course provides students with opportunities to gain on-the-job experience in the construction industry. Students will gain an understanding of the qualities and skills needed to be successful in the construction industry. Coordination and guidance will be provided by Department Instructors.

Credit Hours: 4 Co-op Hours: 256

Prerequisite(s): A minimum grade of C in CON-102

Course Type: Technical

CRJ: Criminal Justice

CRJ-100 Introduction to Criminal Justice

This course examines the day-to-day operation of criminal justice in our society. Emphasis is on the inter-relationships of the components of law enforcement, the courts, corrections, and the juvenile justice system.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CRJ-120 Introduction to Corrections

This course will provide an introductory examination of corrections in the United States. The central theme of the course will be to critically analyze corrections as an integral part of the overall criminal justice system in America.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CRJ-135 Criminal Evidence

Rules of evidence are essential to criminal justice system operations. This course will examine historical developments concerning evidence, types of evidence, witnesses, and the procedures used to regulate evidence.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in CRJ-100.

Co-requisite(s): Must program major.

Course Type: Technical

CRJ-141 Criminal Investigation

This course examines the techniques and procedures used to investigate crimes.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in CRJ-100.

Course Type: Technical

CRJ-143 Police Operations

This course examines the operational aspects of policing to include patrol theories and methods, crime response, operational skills and factors that influence police operations.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

CRJ-151 Defensive Tactics

This course provides instruction on self defense and control techniques necessary for law enforcement. Emphasis is placed on physical fitness, officer safety, criminal and civil liability.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): Must be in program major. A minimum grade of C in CRJ-100.

Pre/Co-requisite(s): A minimum grade of C in CRJ-237 and CRJ-320.

Course Type: Technical

CRJ-200 Criminology

This course explores theories of factors that influence criminal behavior, and analyzes criminal behavior in relationship to other social problems.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CRJ-201 Juvenile Delinquency

This course is an investigation of the social and legal definitions of juvenile delinquency and its causes. It also focuses on the administration of juvenile court, probation and parole, and assessment of present and potential prevention programs.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CRJ-233 Probation, Parole, Community-Based Corrections

This course examines probation and parole practices related to community-based corrections programs throughout the United States. Emphasis is placed on community-based programs for offenders, administration and legal issues of the programs, trends in probation, parole and related community-based programs.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): CRJ-100 and CRJ-120.

Course Type: General Education / Transfer

CRJ-234 Traffic Law

This course provides in depth examination of the State of Iowa traffic laws, and how traffic code enforcement enhances public safety.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

CRJ-237 Criminal and Constitutional Law

This course will review the historical development of constitutional law, the philosophy of law, and the current impact on law enforcement officials. The judicial process will be examined to better understand the societal and political influences that impact current day constitutional decisions. A review of the current constitutional protections afforded to an individual. The course will also provide an examination of the elements of common offenses and the procedural safeguards in the criminal process.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

CRJ-244 Advanced Accident Investigation

This course covers the fundamentals of traffic investigation to include officer response, scene management, measurements, and report preparation.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in CRJ-100.

Course Type: Technical

CRJ-252 Basic Firearms

This course covers the fundamentals of using a firearm with emphasis on safe practices, responsible firearm care, and proficient use of firearms to law enforcement standards.

Meet with an advisor to register for course.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CRJ-100.

Course Type: Technical

CRJ-254 Advanced Firearms

This course expands skills developed in Basic Firearms by enhancing skill and proficiency with pistols and introduces safe use and handling of shotguns.

Meet with an advisor to register for course.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CRJ-100.

Pre/Co-requisite(s): A minimum grade of C in CRJ-252.

Course Type: Technical

CRJ-266 Report Writing and Testifying

Report writing and courtroom testimony skills are essential to detail officer activity and enable effective case prosecution. Report writing chronologically details officer investigative activity, and documents elements of a crime. Effective courtroom testimony is vital to the prosecution and resolution of civil and criminal cases.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in ENG-105 and CRJ-100.

Course Type: Technical

CRJ-282 Crime Scene Investigation

This course involves the study of techniques and procedures used to investigate various crimes and crime scenes. The student will gain fundamental skills in photography, evidence preservation, collection, and processing; and scene measurement and documentation.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CRJ-100.

Course Type: Technical

CRJ-285 Physical Conditioning for Public Services

This course prepares public safety personnel for the physical demands of public safety entrance testing and work demands.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

CRJ-315 Crisis Intervention

This course uses a criminal justice perspective to examine the methods and techniques of crisis intervention, causative factors, typologies of those involved, and psycho-social factors of crisis situations. A certificate in Mental Health First Aid is included.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in CRJ-100 and CRJ-237.

Course Type: Technical

CRJ-316 Juvenile Justice

This course examines the juvenile justice system from a practitioner perspective. It provides operational knowledge of how law enforcement, the courts, and correctional facilities navigate the juvenile offender.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in CRJ-100.

Course Type: General Education / Transfer

CRJ-317 White Collar Crime

This course examines white-collar crime as a social and criminal justice problem, the costs to society, explanations for behavior, and investigative techniques.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in CRJ-100

Course Type: General Education / Transfer

CRJ-318 Crime Analysis

This course enables the student to use intelligence and analytic data to identify and inform tactical, strategic, and administrative crime analysis functions.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in CRJ-100.

Course Type: General Education / Transfer

CRJ-320 Criminal Justice Ethics

An examination of ethical issues in the criminal justice system with an emphasis on reasoning and decision making for professional competence.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

CRJ-322 Tactical Police Operations

This course challenges student skills and decision making within scenario based learning activities.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CRJ-151 and CRJ-254

Course Type: Technical

CRJ-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

CRJ-928 Independent Study

This course provides opportunity for a student to focus previous course work and knowledge on a special issue as well as provide for individualized exploration of topics pertinent to the student's projected objectives within any recognized discipline. Faculty consultation is required prior to registration for this course.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

CRJ-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

CRJ-952 Internship

Internship requires 128 hours of supervised volunteer work with a law enforcement agency. Course eligibility requires Advisor consent based on the ability of the student to successfully complete a criminal background check, and be accepted by an agency. Agency placement is dependent on agency assessment of student fitness to meet hiring requirements. Internship is offered during the 16 week Fall & Spring semesters, and during the 8 week Summer term.

Must be in program major. Instructor consent required to enroll.

Credit Hours: 2 Co-op Hours: 128

Prerequisite(s): A minimum grade of C in CRJ-100.

Course Type: Technical

CRJ-955 Field Observation

Student field experience in an appropriate correctional agency. Enrollment is restricted to second year students who have a minimum 2.00 CGPA and have successfully completed advisor approved courses. Placement based on approval of faculty advisor and host agency.

Credit Hours: 3 Lecture Hours: 16 Co-op Hours: 128

Prerequisite(s): CRJ-100 or CRJ-120.

Course Type: General Education / Transfer

CRR: Collision Repair and Refinish

CRR-304 Introduction to Collision Repair

In this course students receive training on the proper handling of hazardous waste and EPA issues together with technical information about specific auto body safety and health situations. Specific training is provided in tools/equipment usage, parts assembly, filler application, and straightening techniques. Students will also receive training in autobody welding.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

CRR-361 Collision Lab I

The intent of this class is to prepare the students to gather all the resources for there structuring of the automobile. Material conservation, deadlines, human relation skills, leadership qualities and teamwork are closely monitored. This is an important class to prepare the student for their employment in industry.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Pre/Co-requisite(s): Minimum grade of D- in CRR-304.

Course Type: Technical

CRR-511 Collision Production Technician

In this course, students will receive information and training in common collision repair procedures performed by production collision centers. Specific training is provided in straightening procedures for light and heavy collision damage, specialized tools and equipment, and air conditioning systems relating to collision damage.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

CRR-658 Advanced Collision Repair

In this course students will receive hands on experience involving high production practiced used by industry collision repair technicians. Students will receive training on frame machines and attachment equipment used in collision repair shops.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

CRR-659 Advanced Collision Production Tech

In this course students will receive training in collision related suspension and steering systems. Additional training will be received in drive train repairs and wheel alignment and brakes.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

CRR-751 Electronic Estimating

Introduce students to various aspects of computerized estimating software while reinforcing repair procedures.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

CRR-821 Introduction to Refinishing I

Students will receive a thorough understanding of personal health and safety, use of sanding abrasives, air power tools and equipment, and paint guns.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

CRR-822 Introduction to Refinishing II

Students will receive training in refinishing products, masking procedures, corrosion protection, and paint preparation.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of D- in CRR-821.

Course Type: Technical

CRR-874 Advanced Refinishing

This course combines lecture and lab activities to develop advanced automotive refinishing shop production skills by refinishing paint damaged automobiles to pre-accident condition. Paint manufacturers recommendations and refinishing shop standards are used to repair the vehicle to pre-accident condition.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

CRR-879 Refinishing Production Technician

In this course, students will receive hands on experience involving high production practices used by industry technicians. Students will be exposed to time management performance tasks involved in numerous areas of refinishing. Skill levels will be enhanced for various refinish tasks such as paint preparation, masking procedures, blending, and overall refinishing.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

CRR-886 Advanced Refinishing II

This course will provide students with advance paint techniques, training in basic electrical fundamentals and training in Airbag Systems as they apply to collision and refinishing repairs.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Pre/Co-requisite(s): Minimum grade of D- in CRR-874.

Course Type: Technical

CSC: Computer Science

CSC-110 Introduction to Computers

This is an introductory course that surveys a variety of topics to include history, hardware, software, terminology, communications, computer ethics, and societal impact of computers. In addition to computer literacy, students will complete hands-on modules using operating systems, word processing, database, presentation, and spreadsheet software; such as Microsoft Office programs.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): The ability to enter data using a computer keyboard at a rate of no less than 15 words per minute on a three-minute timing. A minimum grade of C- in RDG-039 or appropriate Placement score.

Course Type: General Education / Transfer

CSC-116 Information Computing

This course presents the basic concepts of information systems and computer literacy. The course incorporates theory as well as hands-on practice, which focuses on spreadsheets and database management systems (DBMS).

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of D- in MAT-063.

Course Type: General Education / Transfer

DEA: Dental Assistant

DEA-103 Orientation to Dental Assisting

This course introduces students to dentistry, certification, dental terminology, and legal and ethical aspects of dental practice. Concepts and procedures of preventive dentistry and oral health education are also included.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

DEA-258 Dental Anatomy

This course presents oral and dental structures, head and neck anatomy, oral embryology and histology, and the relationship of oral and dental anatomy to dental procedures and treatment. Also included is a study of basic microbiology, disease transmission and the relationship of disease processes.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: Technical

DEA-262 Dental Sciences

This course provides students with basic understanding of biomedical and dental sciences including: oral pathology and disease processes, pharmacology and therapeutics, emergency treatment, nutrition and dietary considerations for dental patients.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): Minimum grade of C in DEA-103, BIO-163, or both BIO-168 and BIO-173

Course Type: Technical

DEA-302 Dental Radiography

This course covers the principles, properties, techniques and protective procedures involved with exposure of dental radiographs. Primary emphasis is on the development of skill proficiency in techniques of intraoral and extraoral dental radiography.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

DEA-412 Dental Materials I

This course provides information related to various dental materials, their composition, classification, manipulation, preparation and usage. Emphasis is given to materials commonly used in the practice of general dentistry.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

DEA-417 Dental Materials II

This course is a study of restorative materials; specifically gold, porcelain, denture resin, and other metals and their usage in dentistry. Additional laboratory procedures commonly performed in dental offices are also included.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in DEA-412.

Course Type: Technical

DEA-513 Chairside Assisting I

This course is a study of basic operative and chairside assisting procedures; dental equipment, its function and maintenance; dental armamentarium, instrumentation, procedural tray setups, charting, development of clinical records, and patient screening procedures.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

DEA-514 Chairside Assisting II

This course presents instruction in additional chairside assisting procedures including intraoral functions that are legally delegable to dental assistants in Iowa. All procedures are taught to the level of laboratory competence, and some procedures are taught to clinical competency levels.

A study of patient behavior and considerations for special patients is also included.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in DEA-513.

Course Type: Technical

DEA-556 Assisting Clinic I

This course provides students with selected clinical experiences in those basic chairside dental assisting procedures commonly performed in a general dental office. Facilities used will be primarily the school dental clinic and private dental offices. Students will assist dentists in accomplishing necessary dental procedures for patients while rotating through the clinical areas to obtain maximum clinical exposures and experiences. All clinical procedures are performed with supervision of participating dentists and instructors.

Credit Hours: 4 Lab Hours: 0 Clinic Hours: 192

Course Type: Technical

DEA-578 Dental Assisting Clinic II

Application of knowledge and skill as students rotate through dental offices. General and specialty practices are included in rotations.

Credit Hours: 5 Co-op Hours: 320

Course Type: Technical

DEA-591 Dental Assisting Seminar

Discussion and problem-solving from clinical practice. Provides an awareness of types of office situations and discussion of clinical aspects of dental assisting and dentistry. Oral reports and weekly evaluations are required.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): Minimum grade of C in DEA-262, DEA-417, DEA-514, DEA-556, DEA-603, and DEA-701

Co-requisite(s): DEA-578

Course Type: Technical

DEA-603 Dental Specialties

This course provides students with knowledge and understanding of dental procedures in the specialties of Endodontics, Oral Surgery, Prosthodontics, Pediatric Dentistry, Orthodontics and Periodontics. Students are introduced to assisting responsibilities, instrumentation, and procedures of each of these specialties. Dental Public Health and Oral Pathology, as dental specialties, will also be included.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): Minimum grade of C in DEA-513.

Course Type: Technical

DEA-701 Dental Office Procedures

This course is a study of basic responsibilities of dental office receptionists. Procedures included in the course are: management of patient records, filing, completion of insurance claim forms, basic bookkeeping, banking, appointment control, recall management, inventory control, credit and collection, and employer records management. Instruction is provided in computer applications relating to these office management procedures. Also included in this course is a study of office design and office management concepts.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C in BIO-163 or both BIO-168 and BIO-173.

Course Type: Technical

DHY: Dental Hygiene

DHY-111 Head and Neck Anatomy for Dental Hygiene

This course familiarizes the student with the anatomy of the head and neck, oral structures. Knowledge of the anatomy of the head and neck and oral structures is an essential prerequisite of such courses as clinical dental hygiene.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Admission to Dental Hygiene program.

Course Type: Technical

DHY-116 Tooth Morphology

This course will teach the anatomy and structure of each individual tooth crown and root. Permanent and primary dentitions will be studied with emphasis on identification, numbering systems, function, and application of instrumentation skills to each tooth surface.

Credit Hours: 1 Lecture Hours: 0 Lab Hours: 32

Prerequisite(s): Admission to Dental Hygiene program.

Course Type: Technical

DHY-121 Oral Histology and Embryology

This course presents the anatomy of the tooth and its surrounding tissues on a microscopic level. The formation of the face before birth is studied and is followed by an examination of each part of the tooth and its surrounding structures during formation, eruption and function of both the primary and permanent dentitions.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Admission to Dental Hygiene program.

Course Type: Technical

DHY-131 Pharmacology

This course will provide the student with an academic background in the area of pharmacology with relation to the drugs used in the dental practice. The metric system, terminology, drugs and their specific reactions will be presented.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): A minimum grade of C in BIO-173 and CHM-132.

Course Type: Technical

DHY-141 General and Oral Pathology

This lecture course addresses concepts of both General and Oral Pathology. General Pathology content provides information regarding human disease and reviews major diseases of the human body, discussed by system. Oral Pathology content emphasizes pathological conditions of the head, neck and oral structures and relates this information to the Dental Hygiene Model

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in DHY-121.

Pre/Co-requisite(s): A minimum grade of C in BIO-173.

Course Type: Technical

DHY-160 Oral Radiology

Oral Radiology teaches the basic techniques of exposure of common types of dental radiographs, film processing procedures, setup and care of the darkroom, science of the x-ray beam, digital radiography and operation of standard and panoramic x-ray equipment. Lifelike mannequins for student practice are utilized, and emphasis is placed on radiation safety procedures for both patient and operator.

Required admission to the Dental Hygiene program.

Credit Hours: 3 Lecture Hours: 32 Clinic Hours: 48

Course Type: Technical

DHY-175 Fundamentals of Clinical Dental Hygiene

This course serves as a foundation to Clinical Dental Hygiene II, III, and IV. The student will learn the skills of dental hygiene practice and client management through simulated clinical situations as well as in lecture/discussion sessions.

Credit Hours: 6 Lecture Hours: 48 Lab Hours: 96

Prerequisite(s): Admission to the Dental Hygiene program.

Course Type: Technical

DHY-187 Clinical Dental Hygiene II

This course is the first of three in a sequence that provides clinical experience. The student applies the Dental Hygiene Process of Care while working with actual clinic clients. The emphasis of this course is to achieve competency in basic assessment and preventative dental hygiene treatment skills.

Credit Hours: 3 Clinic Hours: 144

Prerequisite(s): Minimum grade of C in DHY-175 and DHY-160.

Co-requisite(s): DHY-188

Course Type: Technical

DHY-188 Clinical Dental Hygiene II Seminar

Dental Hygiene Practicum II complements Clinical Dental Hygiene II by supplying the theory behind the Dental Hygiene Process of Care. This course also introduces the theory behind basic procedures needed to provide comprehensive dental hygiene care.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): Minimum grade of C in DHY-160 and DHY-175.

Co-requisite(s): DHY-187

Course Type: Technical

DHY-210 Introduction To Periodontology

This course will provide first year students the basic concepts and fundamentals of periodontal health and disease. The student will be able to relate this knowledge to the clinical setting.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C in DHY-121.

Co-requisite(s): DHY-141.

Course Type: Technical

DHY-211 Periodontology

An in-depth study of the healthy and diseased periodontium is covered in this course. The student will be able to relate this knowledge to the clinical setting.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): A minimum grade of C in DHY-141 and DHY-210.

Course Type: Technical

DHY-222 Biomaterials for the Dental Hygienist

This course introduces the dental hygiene student to the materials commonly employed in the practice of dentistry and, in particular, to those materials utilized by the dental hygienist. Through lecture sessions, the makeup and properties of the various materials such as plaster and stone, impression material, amalgam and cements are presented, as well as their relationship to one another. Through laboratory experience, the student learns techniques in preparation, mixing, handling and storage of these materials.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CHM-122.

Co-requisite(s): A minimum grade of C in CHM-132.

Course Type: Technical

DHY-240 Ethics and Jurisprudence

This course presents background on the theory, philosophy and ethics for dental hygiene and the profession. Legal aspects of practice are presented as well as aspects of entry into practice and job seeking skills.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C in DHY-175.

Course Type: Technical

DHY-254 Community Oral Health I

The purpose of this course is to provide the student with a background in the development and functions of federal, state and local health systems, and to prepare the student to participate in community health activities.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): A minimum grade of C in DHY-188 and SOC-110.

Course Type: Technical

DHY-259 Community Oral Health Service Learning Experience

This course is designed to provide the students with experience developing and evaluating community oral health programs.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): A minimum grade of C in DHY-254.

Course Type: Technical

DHY-262 Special Needs Patient Education

This course provides basic concepts of learning for behavioral change and the care of patients with special needs.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C in DHY-175.

Course Type: Technical

DHY-271 Pain Control

This course provides the knowledge and skills necessary for the student to perform pain control techniques competently. The course will discuss both the content needed to perform local anesthesia and to perform nitrous oxide/oxygen administration and monitoring.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): A minimum grade of C in DHY-113 and DHY-185.

Co-requisite(s): A minimum grade of C in DHY-131.

Course Type: Technical

DHY-272 Interdisciplinary Health Care

This course will use specialists in the varied health fields to make the student aware of the interrelationships between these specialties and dental hygiene. Additionally, the course promotes an understanding of the potential dental hygiene practice settings through observations made in rotation in the community.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in DHY-254 and DHY-297.

Course Type: Technical

DHY-297 Clinical Dental Hygiene III

This course enables the students to provide comprehensive dental hygiene care to meet the total oral health needs of each client, including referrals for treatment. Students will progressively increase their clinical abilities toward levels of proficiency required for entry level as measured by fulfillment of the clinic competencies for the semester.

Credit Hours: 4 Clinic Hours: 192

Prerequisite(s): A minimum grade of C in DHY-187 and DHY-188.

Co-requisite(s): DHY-211 and DHY-298.

Course Type: Technical

DHY-298 Clinical Dental Hygiene III Seminar

This course will: Introduce adjunctive dental hygiene procedures/techniques and disease control theory along with research methodology. The course also expands on instrumentation techniques, case-based problem solving and radiographic interpretation.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in DHY-187 and DHY-188.

Co-requisite(s): DHY-271 and DHY-297.

Course Type: Technical

DHY-307 Clinical Dental Hygiene IV

This course is the final preparation for the students in clinical practice. When the course is completed, the student will have the proficiency and skill to maintain the ideals of the dental hygiene profession.

Credit Hours: 4 Clinic Hours: 192

Prerequisite(s): A minimum grade of C in DHY-271, DHY-197, and DHY-298.

Course Type: Technical

DHY-308 Clinical Dental Hygiene Seminar IV

This course will incorporate dental hygiene care with critical thinking and case studies for the students as they prepare for dental hygiene licensure.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C in DHY-271, DHY-197, and DHY-298.

Co-requisite(s): DHY-307.

Course Type: Technical

DHY-901 Independent Study Clinical Dental Hygiene

This course is designed to remediate the skills of exploring, calculus detection and removal, and patient evaluation skills previously learned in the clinical portion of the dental hygiene program in preparation of the student retaking the clinical dental hygiene board exam. This course can be taken for 1–3 credit hours.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

DHY-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

DHY-928 Independent Study

This course provides opportunity for a student to focus previous course work and knowledge on a special issue as well as provide for individualized exploration of topics pertinent to the student's projected objectives within any recognized discipline. Faculty consultation is required prior to registration for this course

May be taken for up to 5 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

DRA: Drama — Film and Theatre

DRA-107 Theatrical Arts and Society

This course introduces students to the literary genre of drama throughout history. Emphasis will be on reading, discussing, and evaluating various plays representative of their era and genre. Students will respond to drama through informal and formal written assignments that foster skill in analysis and interpretation. Students will also learn about how the genre of drama has evolved and how these kinds of dramatic narratives interrelate with societies of the past and present.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

DRA-110 Introduction to Film

This course introduces students to the various language systems of film, including film-making techniques, creators, genres, narratives, ideology, and film theory/criticism. Students will explore the cultural importance of cinema as art by analyzing selected movies and clips which demonstrate artistic excellence.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

DRA-130 Acting I

This course introduces the basic acting techniques with emphasis on concentration, movement, voice, and play script analysis. Students will experience the acting process by engaging in various exercises and performing monologues and scenes.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

DSL: Diesel

DSL-360 Advanced Diesel Engines, Emissions, and Fuel Systems

This course introduces the latest engine advancements. Emission systems such as Exhaust Gas Recirculation (EGR), Diesel Particulate Filters (DPF), and Selective Catalytic Reduction (SCR) are covered along with common rail fuel systems.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): Minimum grade of C- inDSL 444 Fuel Systems

Course Type: Technical

DSL-377 Diesel Engine Rebuild

Students are introduced to diesel engine application, design, construction, theory, and operating principles. This course also covers diagnosis, disassembly, and assembly of diesel engines.

Credit Hours: 7 Lecture Hours: 48 Lab Hours: 128

Course Type: Technical

DSL-404 Diesel Truck Power Transfer Systems

A study of the diesel truck power train from the clutch through the rear driving axles. Emphasis is placed on clutch types, transmissions, and drive axles. Key goals of the course are failure analysis and troubleshooting malfunctions.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): Minimum grade of C- in AGM-119, AGM-104, AGM-124, AGM-333, and AGM-224

Course Type: Technical

DSL-411 Equipment Repair I

This course is designed to give students the opportunity to apply competencies previously achieved to repair and service projects.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): Minimum grade of C- in AGM-401

Co-requisite(s): Minimum grade of C- in DSL 404

Course Type: Technical

DSL-424 EFI Engine Systems

This course provides a thorough explanation and hands-on experience in the theory, operation, diagnosis, maintenance and repair of electronic fuel injected diesel engines. Learning activities include the use of testing equipment to diagnose EFI engines. Lab activities are designed to reinforce the understanding and maintenance of these engines.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): Minimum grade of C- in AGM-104, AGM-124, and AGM-333

Course Type: Technical

DSL-444 Fuel Systems

The Fuel Systems course is designed to provide information about diesel fuel injection systems. Mechanical and electronic injection systems, which are commonly used throughout the diesel industry, are studied. Basic system design, pump operation, and tune-up adjustments are covered. Computer diagnostics and software applications used in relation to the heavy-duty engine maker are covered.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

DSL-831 Preventative Maintenance

This course covers routine and extended vehicle maintenance. The course will also cover information on general pre-operational checks and performing planned maintenance repairs to vehicles. Course will also cover DOT inspections, air and hydraulic brake systems, and basic SMAW welding and oxyacetylene cutting.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): A minimum grade of C- in AGM-124.

Course Type: Technical

ECE: Early Childhood Education

ECE-103 Introduction to Early Childhood Education

Gives students a historical and philosophical foundation of the field of early childhood education. Includes an overview of assessment and trends that influence best practices. Explores careers in the field. Addresses influences of families and diversity.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

ECE-125 School Age Care

This course focuses on the unique care necessary for school-age children. Criteria for organizing a positive physical environment coupled with state licensing regulations, center policies, and interactions with families are examined. Students will look at the needs of school-age children and explore methods of addressing these needs in a group care setting.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

ECE-133 Child Health, Safety, and Nutrition

Focuses on current concepts in the fields of health, safety and nutrition and their relationship to the growth and development of the young child ages birth to eight. Blends current theory with practical applications and assessments. Includes the influences of families and diversity on health, safety, and nutrition in early childhood settings.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

ECE-158 Early Childhood Curriculum I

Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages three through eight. Students prepare to utilize developmentally appropriate practices in a context of family and culturally sensitive care. Emphasis is on understanding children's development stages and developing appropriate learning opportunities, interactions and environments in the following areas: dramatic play, art, music, fine and gross motor play.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

ECE-159 Early Childhood Curriculum II

Focuses on the development, implementation and assessment of appropriate environments and curricula for young children ages three through eight. Students prepare to utilize developmentally appropriate practices in a context of family and culturally sensitive care. Emphasis is on understanding children's development stages and developing appropriate learning opportunities, interactions and environments in the following areas: emergent literacy, math, science, technology and social studies.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

ECE-170 Child Growth and Development

Reviews typical and atypical development of children from conception to adolescence in all developmental domains. Presents interactions between child, family and society within a variety of community and cultural contexts. Examines theories associated with our understanding of children.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

ECE-221 Infant/Toddler Care and Education

Focuses on care, education, and assessment of children from birth to thirty-six months. Prepares students to utilize developmentally appropriate practices including responsive caregiving, routines as curriculum, importance of relationships with diverse families, and a focus on the whole child in inclusive settings.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

ECE-243 Early Childhood Guidance

Focuses on effective approaches and positive guidance strategies for supporting the development of all children. Emphasizes supportive interactions and developmentally appropriate environments. Uses assessment to analyze and guide behaviors. Studies impact of families and diversity on child guidance.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

ECE-250 Advanced Curriculum Planning

This course acquaints students with center environment planning and evaluation. It addresses the role of the teacher as well as program evaluation for early childhood centers. Students also look at community resources for expanding the center environment.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): EDE-158 and ECE-159.

Course Type: Technical

ECE-260 Current Topics and Issues in Child Care

National, state and local topics and issues impacting childcare are examined.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

ECE-274 Field Experience I

Supervised experience in selected early childhood settings serving children ages birth through eight. Includes integration of theory, research, and reflective practice. Provides an understanding of developmentally appropriate practices and the developmental stages of diverse populations of young children and families. Emphasizes professional relationships and behavior, appropriate adult/child interactions, basic curriculum planning, and program routines.

Credit Hours: 2 Co-op Hours: 128

Prerequisite(s): ECE-221.

Co-requisite(s): ECE-994.

Pre/Co-requisite(s): ECE-158, ECE-159, ECE-170, and ECE-243.

Course Type: Technical

ECE-284 Field Experience II

The field experience provides on-the-job training, practical application of knowledge gained in the classroom, documenting observations of children, and an opportunity to participate with a child care team involved with children ages 3 through 5.

Credit Hours: 2 Co-op Hours: 128

Prerequisite(s): A minimum grade of D in ECE-274 and ECE-944.

Co-requisite(s): ECE-945.

Course Type: Technical

ECE-290 Early Childhood Program Administration

Skills in planning, implementing, and evaluating programming are introduced. Staff supervision and evaluation, in-service training and orientation, and harmonious working relationships, are other topics included in this course.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): ECE-158 and ECE-159.

Course Type: Technical

ECE-298 Career Strategies for Early Childhood

Career Strategies for Early Childhood prepares students for becoming an employee and employer in child care settings. It includes the strategies involved in seeking and securing a position in child care, along with recruiting and employing a child care worker. Included for the job seeker will be an introduction to the job search process, including resume writing, developing cover letters and the interview process. Included for the employer will be recruitment procedures, laws governing the hiring of child care employees, screening of applicants and conducting and evaluating interviews.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

ECE-299 Early Childhood Professional Portfolio

Develop professional portfolio for Early Childhood, including artifact collections, resume, and teaching philosophy.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

ECE-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ECE-944 Field Experience Seminar I

Field Experience Seminar 1 provides support for the systemic refinement of skills necessary for a successful experience in the field. Professional relationships and behaviors, appropriate adult/child interactions, curriculum planning, and experiences in the field will be emphasized.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

ECE-945 Field Experience Seminar II

Field Experience II Seminar provides support for the systematic refinement of the skills necessary for a successful Field Experience II experience through receiving feedback on assignments and engaging in discussions of relevant topics with instructors and peers.

Credit Hours: 1 Lecture Hours: 16

Co-requisite(s): ECE-284.

Course Type: Technical

ECN: Economics

ECN-110 Introduction to Economics

This is a one-semester survey course covering basic economic issues and applications. The course includes such topics as supply, demand, pricing and production decisions by firms, consumer decision making, national income and output determination, unemployment and inflation, Classical and Keynesian theories, money and banking, and fiscal and monetary policies. International issues will also be discussed. (No credit given if credit earned in ECN120 or ECN130.)

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

ECN-120 Principles of Macroeconomics

Principles of supply and demand and the price mechanism will be presented. Descriptions and interactions of the consumer, business, government, and international sectors will be studied as well as their effects on output, employment, and growth in the economy. The course includes a study of the banking system and monetary policy, fiscal policy, economic growth, differing macroeconomic viewpoints, and international issues.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D- in MAT-063 or appropriate math placement score.

Course Type: General Education / Transfer

ECN-130 Principles of Microeconomics

Principles of supply and demand, elasticity, and pricing will be studied. The course includes such topics as resource allocation of firms, pricing and output decisions in different market structures, and consumer choice theory. International issues and the world economy will be integrated into the course.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D- in MAT-063 or appropriate math placement score.

Course Type: General Education / Transfer

EDU: Education

EDU-130 Home, School, and Community Relations

Focuses on the importance of collaborative efforts of the school, home, and community to the promotion of the children's healthy development. Research relating to parental involvement, impact of inclusion, and factors which place families at risk are examined. Explores attitudes, philosophies, and practical techniques with emphasis on building respectful, culturally sensitive relationships with families, utilizing community resources and working with diverse families.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

EDU-210 Foundations of Education

Examines American education from a historical, philosophical, and sociological perspective. Challenges and issues in education today will be discussed in the context of school organization, politics, funding, curriculum, professionalism, legal issues, and effective school and teacher characteristics.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

EDU-214 Exploring PK-12 Education

This course is designed to give students the opportunity to gain insight into the teaching profession and examine what it means to be a PK-12 teacher. Students will critically evaluate teaching as their chosen or possible profession. An overview of the skills and knowledge they will need to be successful professionals will be investigated. Current and future trends in public education will be examined.

Credit Hours: 2 Lecture Hours: 32

Course Type: General Education / Transfer

EDU-223 Multicultural Education

This course introduces conceptual, theoretical, and philosophical issues in Multicultural Education (MCE). Students learn instructional strategies for making their future multicultural classrooms into effective learning communities that are collaborative, inclusive, developmentally appropriate, and globally oriented.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

EDU-235 Children's Literature

The course is designed to present the dynamics of children's literature. It promotes the selection and evaluation of literature for children as well as how to engage young readers in a variety of literary genres. The course will emphasize literature as a key element of the reading curriculum, grades Preschool-8 and beyond. The course will be relevant to those interested in education and literacy.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

EDU-240 Educational Psychology

The study of learning as it relates to cognitive, affective, and psychomotor processes; personal, social, and moral development; abilities and exceptionality and motivation, measurement and classroom management, exceptionality and individual differences; curriculum development and assessment; motivation and classroom management.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): PSY-111 and PSY-121.

Co-requisite(s): EDU-920.

Course Type: General Education / Transfer

EDU-246 Including Diverse Learners

Students are introduced to the issues and practices regarding the inclusion of diverse student populations in general education settings. The needs of all students including general education, special education, and gifted will be emphasized. Strategies for adapting curriculum and the classroom will be examined. Support services that are available to teachers and students will be explored.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

EDU-255 Technology in the Classroom

This is a basic course in the planning and practical use of technology resources to enhance and extend the learning process in the face to face classroom, hybrid and online learning. Students will be exposed to various ways of thinking about educational media and its applications in the classroom. The course is designed to provide the student with experiences that will enable them to select, arrange, utilize, and produce a variety of resources to enhance student learning through their creation of a Thematic Unit.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

EDU-901 Academic Service Learning Experience

Students in this course develop and/or implement service learning projects to help the college's community including the surrounding local community under the supervision of college faculty and in cooperation with the staff of community organizations and agencies.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

EDU-920 Field Experience

This course provides an observation and participation experience to explore duties, roles and responsibilities of teachers to the school community. This takes place in area schools under the direction and guidance of classroom teachers. May be taken for 1 or 2 credits.

Credit Hours: 1 Lab Hours: 32

Co-requisite(s): EDU-240

Course Type: General Education / Transfer

EDU-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

Can be taken for 1 – 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

EDU-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

EDU-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

EGR: Engineering

EGR-410 PLTW - Principles of Engineering

This course explores technology systems and manufacturing processes using the methodology of project-based engineering problem solving. Learning activities explore a variety of engineering disciplines and address the social and political consequences of technological change.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

EGR-450 PLTW - Computer Integrated Manufacturing

This course enhances computer modeling skills by applying principles of robotics and manufacturing automation to the creation of models of three-dimensional designs.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): EGR-400.

Course Type: Technical

EGT: Engineering Technology

EGT-108 Principles of Engineering

This course explores technology systems and manufacturing processes using the methodology of project-based engineering problem solving. Learning activities explore a variety of engineering disciplines and address the social and political consequences of technological change.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

EGT-140 Fluid Power

This is a course of study in the basic fluid power principles and components of fluid power systems.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

EGT-144 Fluid Power Applications

This course is a continuation study of fluid power systems and applications with particular emphasis on troubleshooting and performance evaluations.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

EGT-149 Fluid Power Systems II

This is a continued study of fluid power components, their operations, and functions in circuit application, as well as graphic circuit print reading.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Pre/Co-requisite(s): EGT-140.

Course Type: Technical

EGT-154 Pneumatics

This course will teach the skills and knowledge for pneumatic devices, uses, connections and maintenance.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

EGT-212 Hydraulics Troubleshooting

This course will teach the skills necessary for safe performance testing and troubleshooting of hydraulic components and systems.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of D in EGT-149.

Course Type: Technical

EGT-243 Statics and Strength of Materials

Statics deals with forces on structural members at rest. Topics include vector and scalar quantities, resultants of coplanar force systems, free-body diagrams, equations of equilibrium, equilibrium in force systems. Strength of materials deals with centroids and moments of inertia, the relationship between stress and strain; shear, moments and deflections in beams; columns; and welded and bolted connections.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of D- in PHY-162 or PHY-183.

Course Type: Technical

EGT-400 PLTW - Introduction to Engineering Design

This course uses a design development process while enriching technical and engineering problem-solving skills; students create and analyze models using specialized computer software (AutoCAD Inventor)

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

EGT-410 PLTW - Principles of Engineering

This course explores technology systems and manufacturing processes using the methodology of project-based engineering problem solving. Learning activities explore a variety of engineering disciplines and address the social and political consequences of technological change.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

EGT-416 Civil Engineering and Architecture

This is a combined lecture and lab course to introduce students to the interdependent fields of civil engineering and architecture; students explore various systems of architecture and civil engineering, learn project planning, and basic building design using specialized building information modeling software.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

EGT-420 PLTW - Digital Electronics

This course teaches applied logic through work with electronic circuitry, which students also construct and test for functionality.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

EGT-450 PLTW - Computer Integrated Manufacturing

This course enhances computer modeling skills by applying principles of robotics and manufacturing automation to the creation of models of three-dimensional designs.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

EGT-470 PLTW - Engineering Design and Development

This course is a research course that requires students to formulate the solution to an open-ended engineering question. With a community mentor and skills gained in their previous courses, students create written reports on their applications, defend the reports, and submit them to a panel of outside reviewers.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

ELT: Electronics

ELT-104 Electronics Drafting

An introduction to drafting fundamentals including: two-dimensional, orthographic, and sectional. Auxiliary and pictorial; electronic symbols, devices, circuitry and systems, using CAD.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of D- in EGT-108 or EGT-140.

Course Type: Technical

ELT-120 Schematics for Electromechanical Techs

This course is to train factory electricians and mechanics to read most under-roof factory schematics in the food, manufacturing, warehousing, and energy production industries.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in ELT-139, EGT-140, ELT-215, and ELT-234, or instructor approval.

Course Type: Technical

ELT-133 Electric Motor Drives

This course in an introduction to the fundamental principles of electronic motor drive technologies. Topics to be presented will include servo-motor theory, encoders, tachometers, electronic and mechanical brakes/clutches, and closed-loop systems. Specific drives to be studied will include DC servo, AC variable-frequency, and AC servo.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

ELT-139 Electrical Systems

Students will gain knowledge and hands-on experience in DC and AC circuits and principles, electrical measurement instruments, electrical safety, conductor sizes and types, wiring applications, wiring techniques, and troubleshooting.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Pre/Co-requisite(s): MAT-772

Course Type: Technical

ELT-156 Industrial Electronics

This course covers the theory and application of devices and circuits used in industrial and commercial electronics.

Credit Hours: 5 Lecture Hours: 32 Lab Hours: 96

Prerequisite(s): Minimum grade of D- in ELT-322.

Course Type: Technical

ELT-192 Introduction to Computer Science

This course will introduce the student to the basic use of the personal computer. The course will include a study of Word Processing, Spreadsheet, and BASIC programming language.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

ELT-215 Motors and Controls

This class stresses motor control systems, devices, circuit design and construction, and troubleshooting techniques. Specific topics will include electrical safety, lockout/tagout procedures, relays, timers, pilot devices, and solid state control technologies. Extensive laboratory exercises using industrial-grade components will enhance classroom studies.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): ELT-139.

Course Type: Technical

ELT-216 DC Controls Circuits

The course is an introduction DC control components and DC control systems used in industrial applications. Both stand-alone circuits and PLC circuits are covered.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in ELT-139.

Course Type: Technical

ELT-234 PLC Programming

An introduction to the fundamental principles of programmable controller operation. Topics to be presented will include basic system configurations and hardware, relay-equivalent instructions, timers and counters, data manipulation commands, and searching/program documentation.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in ELT-139.

Pre/Co-requisite(s): ELT-215.

Course Type: Technical

ELT-239 Advanced Electrical Systems

This class stresses electrical distribution systems, electrical transformers, AC and DC motor theory, operation and repair, manual and magnetic starters, and motor overload protection. Specific topics will include types of electrical distribution systems, transformer theory and operation, lockout/ tagout techniques, use of motor testing devices, and construction, sizing, and installation of motor overload devices.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of C- in ELT-139.

Course Type: Technical

ELT-240 PLCs II

As modern manufacturing becomes more computer-control oriented the industrial programmable controller plays an increasingly important role. In this course the learner will study advanced programming commands, sequencers, file moves, arithmetic functions, and data communications; advanced PLC architectures; as well as interfacing, troubleshooting, and applications.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in ELT-234.

Course Type: Technical

ELT-245 PLCs III

An introduction to the programmable controller operation using Siemens PLC systems. Topics to be presented will include system configurations and hardware, relay-equivalent instructions and timers and counters for ladder logic programming, and function block diagram programming concepts.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in ELT-139.

Course Type: Technical

ELT-290 DC Electricity

This course presents basic concepts of electricity and electronics and the application of these concepts to direct current circuits. This course assumes no previous knowledge of electricity or electronics. An understanding of algebra is required.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of D- in MAT-504.

Course Type: Technical

ELT-291 AC Electricity

This course presents basic concepts of electricity and electronics and the application of these concepts to alternating current circuits. This course is a continuation of the DC Electricity course. An understanding of algebra is required.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of D- in ELT-290 or MAT-504.

Course Type: Technical

ELT-315 Digital Logic for Industrial Applications

This course provides students with knowledge and understanding of digital logic functions in industrial applications. Topics of study include combinational logic circuits, flip-flops, counters, registers and semiconductor memory devices.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Co-requisite(s): A minimum grade of C- in ELT-139.

Course Type: Technical

ELT-321 Operational Amplifiers

This course is an introduction to operational amplifiers and their uses. This course provides the foundation for advanced courses in electronics circuit and systems by teaching the operating characteristics of operational amplifiers and circuit design using those devices.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): ELT-291.

Pre/Co-requisite(s): MAT-514.

Course Type: Technical

ELT-322 Electronics Devices

This course is an introduction to electronic devices and their uses. This course provides the foundation for advanced courses in electronics circuit and systems by teaching the operating characteristics of electronic devices and circuit design using those devices.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): A minimum grade of D- in ELT-291.

Pre/Co-requisite(s): A minimum grade of D- in MAT-154.

Course Type: Technical

ELT-403 Visual Basic

This course introduces students to Visual Basic programming languages. The objective of this course is to provide students with the understanding of high level programming languages and programming techniques used in problem solving.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of D- in ELT-600.

Course Type: Technical

ELT-415 Communication Circuits I

This course is an introduction to communication circuits, with an in depth study of A.M. and F.M. transceiver theory.

Credit Hours: 5 Lecture Hours: 16 Lab Hours: 128

Prerequisite(s): A minimum grade of D- in ELT-322.

Course Type: Technical

ELT-417 Computer Systems

This course provides the students with the understanding of personal computer hardware systems and administration of various computer operating systems. Also microcomputer troubleshooting and maintenance is covered.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of D- in EGT-108, EGT-410, ELT-469, or EGT-420.

Course Type: Technical

ELT-444 Industrial Networking

This course introduces the student to networking industrial equipment such as PLC's, Variable Frequency Drives, control components and computers. Industry-standard connectivity is covered and actual networks are set up.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in ELT-234.

Course Type: Technical

ELT-469 Digital Circuits and Systems

This course provides students with knowledge and understanding of digital logic circuit design and operation using integrated circuits. Some topics included are combinatorial logic circuits, flip-flops, arithmetic circuits, counters, registers, and logic families, with an introduction to hardware and applied C programming of Microcontrollers.

Credit Hours: 5 Lecture Hours: 32 Lab Hours: 96

Prerequisite(s): A minimum grade of D- in ELT-322 and ELT-600.

Course Type: Technical

ELT-494 Data Acquisition Systems

This course includes signal conditioning, transducer characteristics, microcontroller input/output and interfacing using C programming language and applications.

Credit Hours: 5 Lecture Hours: 32 Lab Hours: 96

Prerequisite(s): A minimum grade of D- in ELT-600.

Course Type: Technical

ELT-497 Communication Circuits II

This course is continuation of Communication Circuits I. The course also includes the study of microwave communications.

Credit Hours: 6 Lecture Hours: 48 Lab Hours: 96

Prerequisite(s): A minimum grade of D- in ELT-415.

Course Type: Technical

ELT-532 Semiconductors for Industrial Applications

This course provides an introduction to electronic devices and their uses. Applications of semiconductors in power electronics circuits for control are covered. This course provides the foundation for advanced courses in electronics systems.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in ELT-139.

Course Type: Technical

ELT-600 Applied Computer Programming

This course introduces students to Visual C and LabView programming languages. The objective of this course is to provide students with the understanding of high level programming languages and programming techniques used in problem solving.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

ELT-703 Introduction to Networking

This course introduces the student to the fundamental building blocks that form a modern computer network, such as protocols, topologies, hardware, and network operating systems. The course then provides in-depth coverage of the most important concepts in contemporary networking, such as client/server architecture, TCP/IP, Ethernet, wireless transmission and security.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in ELT-494.

Course Type: Technical

ELT-704 Embedded Processors

This course is an introduction to microcontroller theory and applications. The objective of this course is to provide students with the basic microcontroller theory necessary to understand the operation and interfacing. This includes typical microcontroller architecture with C programming, input/output and interfacing concepts, hardware/software interaction and applications.

Credit Hours: 2 Lab Hours: 64

Prerequisite(s): A minimum grade of D- in ELT-494.

Course Type: Technical

ELT-736 Instrumentation and Control

With the increase in computer-controlled systems in modern business and industry the study of instrumentation and transducers is vital to a maintenance technicians education. This course will concentrate on the types of instrumentation currently available, interfacing and cabling techniques, signal conditioning, noise control, and applications and troubleshooting of complete systems.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in ELT-139.

Course Type: Technical

ELT-802 Electronics Design Project I

This course is the first of a series of two design courses. This course will introduce the student to design concepts and procedures as related to the design of electronics equipment. This course will require the student to identify an electronics design project as an individual or as a member of a team that will be completed during this course and the Electronics Design Project II course. All design projects will be subject to instructor approval.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

ELT-803 Electronics Design Project II

This course is a continuation of ELT802 Electronic Design Project I. The student will complete the design project that was identified and started in Electronic Design Project I. This course will require the student to design, prototype, troubleshoot, and debug an electronics related project based on technology presented throughout the EET program.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): ELT-802.

Pre/Co-requisite(s): ELT-156.

Course Type: Technical

ELT-818 Electrical Troubleshooting

Electrical Troubleshooting course will provide students with a systematic approach to electrical troubleshooting. This includes the use of test equipment to test components or entire systems. Students will use critical thinking to analyze the state of an electrical system.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of D in ELT-239 and ELT-215.

Course Type: Technical

EMS: Emergency Medical Services

EMS-114 Emergency Medical Responder

This course provides the student with the necessary skills and knowledge to identify and treat life-threatening emergencies, wounds and fractures, medical and environmental emergencies and patient access and handling. This course utilizes a combination of classroom lecture and skills practice.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

EMS-201 Emergency Medical Technician

This course is for individuals who anticipate working with an ambulance service, hospital emergency department, fire department or other occupational field where emergencies are common. Course includes topics related to assessment and treatment of illness and injury. This course also includes a clinical and field component.

Credit Hours: 7 Lecture Hours: 64 Lab Hours: 64 Co-op Hours: 64

Prerequisite(s): Minimum grade of C in ENG-060, or ENG-061, or COM-781, or ENG-105, or ENG-106, or equivalent assessment scores. Minimum grade of C in RDG-039 or equivalent assessment scores.

Course Type: Technical

EMS-363 Emergency Medical Technician I

Prepares the student to provide emergency care at an Emergency Medical Technician (EMT) level as outlined by the National Emergency Medical Services Education standards. Introduces basic emergency care concepts including fundamental knowledge of the EMS system, safety/well-being of the EMT and medical/legal and ethical issues to the provision of emergency care. Focuses on adult patient assessment, care and, transportation. Students receive Mandatory Reporting for child/adult training and earn American Heart Association Basic Life Support certification.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C in ENG-060 AND RDG-039 or equivalent assessment score.

Course Type: Technical

EMS-364 Emergency Medical Technician II

Introduces shock and resuscitation, patient assessment, care and transportation of the acutely ill, trauma patient, special patient populations, and EMS operations. Focuses on Geriatric Education for EMS (GEMS), Hazmat Awareness, and Incident Command. Students will be required to demonstrate proficiency for skills within the scope of practice for patients of all ages.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Pre/Co-requisite(s): A minimum grade of C in EMS-363.

Course Type: Technical

EMS-365 Emergency Medical Technician II Clinical

Prepares students to provide emergency medical assessment, care, and transportation of acutely ill or injured patients of all ages. Develops student proficiency in previously learned skills when providing direct patient care in selected clinical settings. Requires student participation in and documentation of patient contacts and field experience approved by the medical director and the EMS program director. Students must demonstrate competency in skills for patients of all ages within the scope of practice.

Credit Hours: 1 Co-op Hours: 64

Pre/Co-requisite(s): A minimum grade of C in EMS-364.

Course Type: Technical

EMS-541 Clinical I

This course will provide clinical atmosphere for performance of psychomotor skills as described by the National Highway Traffic Safety Administration, National Standard Paramedic Curriculum. To successfully complete this course, students must demonstrate competency in skills for patients of all ages within the scope of practice. The student will participate in and document patient contacts and field experience. Additional contact hours (up to 3 times stated minimum) may be needed to meet the course competencies. Permission of instructor required.

Credit Hours: 3 Co-op Hours: 192

Prerequisite(s): A minimum grade of C- in HSC-113, BIO-168, and BIO-173.

Co-requisite(s): EMS-610, EMS-619, EMS-641, and EMS-674.

Course Type: Technical

EMS-546 Clinical II

This course will provide clinical atmosphere for performance of psychomotor skills as described by the National Highway Traffic Safety Administration, National Standard Paramedic Curriculum. To successfully complete this course, students must demonstrate competency in skills for patients of all ages within the scope of practice. The student will participate in and document patient contacts and field experience. Additional contact hours (up to 3 times stated minimum) may be needed to meet the course competencies. Permission of instructor required.

Credit Hours: 3 Co-op Hours: 192

Prerequisite(s): A minimum grade of C in EMS-541, EMS-610, EMS-619, EMS-641, and EMS-674.

Course Type: Technical

EMS-610 Paramedic Pharmacology and Medication Administration

This is a required course in Hawkeye's National Paramedic Education Program. This course prepares the paramedic to administer medications per the paramedic scope of practice.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in BIO-168, BIO-173, and HSC-113.

Course Type: Technical

EMS-619 Airway and Patient Assessment

The course includes Module 2 (Airway Management and Ventilation) and Module 3 (Patient Assessment) of the DOT National Standard Curriculum for EMT Paramedics. Content will include advanced airway management physical assessment, field assessment, clinical decision making, documentation and the assessment and management of respiratory emergencies. The lab component of this course includes skills in airway management and ventilation, history taking, techniques of physical examination, patient assessment, clinical decision making, communication and AHA ACLS. All will be practiced and demonstrated.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in BIO-168, BI0-173, and HSC-113.

Course Type: Technical

EMS-641 Introduction to Paramedicine

Provides an overview of paramedic roles and responsibilities and the emergency medical service system. Includes discussion of medicolegal and ethical issues in EMS, agents of trauma and disease, and career opportunities for paramedics. Provides discussion and demonstration of proper documentation in EMS, emergency vehicle operations, and non-patient care aspects of EMS.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in BIO-168, BI0-173, and HSC-113.

Course Type: Technical

EMS-650 Medical and Psychological Emergencies

Lecture and case-based teaching in the pathophysiology, recognition and advanced life support assessment and management of emergencies involving the nervous, endocrine, renal, and gastrointestinal systems. Assessment and intervention in psychological emergencies.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C in EMS-541, EMS-610, EMS-619, EMS-641, and EMS-674.

Course Type: Technical

EMS-654 EMS Operations

This course will prepare the learner to function in EMS operations in the out-of-hospital environment and includes emergency vehicle operator and HAZMAT operations certifications.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in EMS-546.

Course Type: Technical

EMS-655 Transition to Paramedic Practice

This course will provide a platform for the student to apply cognitive, psychomotor, and affective skills to actual practice during a field internship. This course will also include comprehensive psychomotor exercises in a lab setting to prepare the paramedic student for national certification.

Credit Hours: 4 Lab Hours: 32 Co-op Hours: 192

Prerequisite(s): A minimum grade of C in EMS-546.

Course Type: Technical

EMS-674 Cardiology for the Paramedic

Cardiology for the Paramedic will focus on assessing the prehospital cardiac patient, interpreting electrocardiograms, and formulating treatment regimens for these patients.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in BIO-168, BIO-173, HSC-113.

Course Type: Technical

EMS-677 Special Populations for the Paramedic

Special Patient Populations for the Paramedic explores illness and injury in the obstetric/gynecologic, neonatal, pediatric, geriatric, and chronically ill patient populations.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C in EMS-619, EMS-641, EMS-610, EMS-541, and EMS-674.

Course Type: Technical

EMS-678 Traumatic Emergencies for the Paramedic

Traumatic Emergencies for the Paramedic explores the science of traumatic injuries, their detection and treatment. Major topics include: soft tissue, shock, hard tissue, nervous system, and internal injuries.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in EMS-641, EMS-619, EMS-610, EMS-674, and EMS-541.

Course Type: Technical

EMS-856 Management of Emergency Medical Services

This course is for students interested in the practice and principles of Emergency Medical Services (EMS) systems management and the processes that contribute to the effectiveness of day-to-day operations within an EMS organization. This course introduces the EMS professional to topics that include government structure, strategic planning, injury prevention, risk management and safety, customer service, human resources management, financial management, fleet management, career development, quality management, data collection and research, labor relations, and special operations.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

EMS-900 Education in EMS

This course is for students interested in Emergency Medical Services (EMS) education. This course introduces the EMS professional to the education system as it relates to EMS education. Students explore issues in curriculum development, teaching, program direction, and development. Successful completion of this course is required for EMS instructor endorsement in Iowa.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

ENG: English Composition

ENG-060 College Preparatory Writing I

This course is the first in the college writing sequence. It provides students with opportunities to read and comprehend increasingly difficult texts in a variety of genres; to think more deeply and critically about the issues and ideas presented in these texts; and to respond to those texts in writing with increasing fluency, confidence, and clarity. Students should connect personally with assigned reading material and communicate their thoughts clearly in writing using Standard English. This course emphasizes responses grounded in the writer's personal interaction with the assigned text. It prepares students for the next level in their writing sequence.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Appropriate placement scores or equivalent.

Course Type: Developmental

ENG-061 College Preparatory Writing II

This course encourages students to improve their critical thinking skills, reading comprehension, and writing proficiency for inquiry, learning, thinking, and communication. Students will read, discuss, and respond to a variety of texts of different genres so as to analyze texts and write for different purposes. Students will work individually and collaboratively to produce, revise, and edit written work. Central to the objective of this course is developing a personal writing process: generating ideas, producing multiple drafts, revising, and editing. This course prepares students to advance into their appropriate program writing sequence.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): ENG-060 or appropriate placement scores or equivalent.

Course Type: Developmental

ENG-105 Composition I

Composition I emphasizes fluency, thesis-driven organization, the use of supporting details, and research techniques. Writing is approached as a recursive process that includes prewriting strategies, drafting, revising, and editing. The course helps students shape writing to serve readers' needs and define a sense of purpose in their writing. It also gives students strategies for reading college-level material.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Appropriate placement scores or equivalent.

Course Type: General Education / Transfer

ENG-106 Composition II

Composition II aims to review and extend writing principles learned in Composition I to analytical, argumentative, and research-based writing. This course emphasizes critical reading, evaluation, and precise and responsible source citation.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D- in ENG-105.

Course Type: General Education / Transfer

ENG-221 Creative Writing

Creative Writing is a beginning course for students interested in writing poetry, short stories, and creative non-fiction. The course will focus on introducing and developing some of the technical skills of the craft, with an emphasis on methods for generating topics and content.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

ENG-230 Creative Writing: Fiction

This course will focus on the study and practice of fiction. The content emphasis is on writing the short story with practice and study of the proper elements of writing. These elements are also applicable to the writing of the novel.

Credit Hours: 3 Lecture Hours: 48

Pre/Co-requisite(s): A minimum grade of D- in ENG-221.

Course Type: General Education / Transfer

ENG-235 Playwriting and Screenwriting

Playwriting and Screenwriting is a writing workshop that offers students practical experience in the creative process of producing stage-worthy plays and marketable screen plays. Through the study and discussion of published and produced plays, students will learn appropriate techniques for the dramatic form and will use the writing process to apply the techniques to develop and present their own work.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

ENG-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course may be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ENG-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ENG-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ENV: Environmental Science

ENV-115 Environmental Science

This natural science course addresses the manner in which we approach our environment today and how it will affect the world we live in tomorrow. This course examines the challenges of: developing sustainable energy sources, maintaining the quality of our air, water, and soil, and preserving the remaining biodiversity and habitat, and human population pressures as they relate to the environment. As these challenges are examined, possible solutions will be evaluated.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

ENV-116 Environmental Science Lab

This laboratory course provides a hands-on approach to understanding challenges to our environmental health. The course examines population growth, a framework for understanding the extent of habitat loss and degradation and its impact on biodiversity; water quality and treatment; soil quality and management practices; examination of energy consumption and alternatives; and an evaluation of ecosystem interactions.

Credit Hours: 1 Lab Hours: 32

Pre/Co-requisite(s): ENV-115

Course Type: General Education / Transfer

ENV-155 Residential Energy Auditing

The Residential Energy Auditing course covers residential energy auditing and associated heating and air-conditioning equipment. The concepts of heat flow, energy audit software, building science, building envelope diagnostics, construction practices, material costs, moisture concerns, proper insulation and air sealing techniques, energy pricing, energy modeling, and residential HVAC systems. Equipment selection, layout, piping techniques, troubleshooting, codes, preventive maintenance, diagnostics, multiple systems, and accessories are also covered.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

ENV-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course may be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ENV-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ENV-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

ESL: English as a Second Language (Non-intensive)

ESL-005 ESL Reading for Academic Purpose I

This is the first of two courses designed for non-native speakers of English to acquire basic reading skills. The course introduces students to effective reading strategies, approaches to reading in a variety of genres, strategies to expand vocabulary, and basic library research. Students are also encouraged to improve their reading fluency through extensive reading.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): Appropriate placement scores or equivalent.

Course Type: Developmental

ESL-011 ESL Writing for Academic Purpose I

This is the first of two courses designed for non-native speakers of English in the acquisition of basic grammatical structures of English and writing skills. The primary focus of the course is to develop students' competence and confidence in writing for academic purposes. Students will review basic grammatical rules and structures, understand the elements of paragraph through process writing, practice writing for different purposes, expand vocabulary, and develop fluency in writing.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): Appropriate placement scores or equivalent.

Course Type: Developmental

ESL-014 ESL Listening and Speaking for Academic Purpose I

This is the first of two courses designed for non-native speakers of English to acquire basic aural and oral skills. The primary focus of the course is to prepare students for academic content. Students will be involved in a variety of communicative activities to increase their confidence in understanding and communicating with others, to improve fluency as well as accuracy, to expand vocabulary, to practice note-taking skills, and to learn about American culture.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): Appropriate placement scores or equivalent.

Course Type: Developmental

ESL-020 English as a Second Language Lab

This is an individualized lab course for non-native speakers of English. The course provides a variety of tasks to improve English fluency and study skills. Students are given opportunities to become familiar with resources at HCC, expand their vocabulary, and become more fluent in written and spoken English. This course can be used to prepare for other EAP (English for Academic Purposes) courses. It is designed to accommodate students at all levels based on their English proficiency levels and academic needs.

Credit Hours: 2 Lab Hours: 64

Prerequisite(s): Instructor approval.

Course Type: Developmental

ESL-083 ESL Writing for Academic Purpose II

This is a course for non-native speakers of English in the acquisition of advanced grammatical structures and writing skills (necessary for academic English). The course is especially designed to develop advanced writing skills that will be needed in order to successfully complete transferable academic classes. Students will review problems in English grammar, analyze academic writing, practice writing for different purposes, and be introduced to different documentation styles.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): ESL-011 or appropriate placement scores or equivalent.

Course Type: Developmental

ESL-084 ESL Reading for Academic Purpose II

This is a course in continuing the acquisition of reading skills in English for non-native speakers. The primary goal of the course is to prepare students to become independent readers and to manage academic texts. Students are given opportunities to apply reading strategies effectively, to improve comprehension skills, to expand vocabulary, and to develop library research skills needed for academic study.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): ESL-005 or appropriate placement scores or equivalent.

Course Type: Developmental

ESL-089 ESL Listening and Speaking for Academic Purpose II

This is a course in continuing the acquisition of aural and oral skills in English for non-native speakers. The course is designed to help students develop listening and speaking skills that will be needed to be successful in fully transferable college courses. Skills taught include listening strategies, note taking, oral presentations, and vocabulary development. Students will also develop a deeper understanding of American culture through various activities.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): ESL-014 or appropriate placement scores or equivalent.

Course Type: Developmental

FIN: Finance

FIN-121 Personal Finance

This course enables students to achieve high standards and competencies in economic principles in contexts of high relevancy and applicability to their individual, family, professional, and community lives. A project-based approach that utilizes higher order thinking, communication, leadership, and management processes will integrate course topics. Upon completion, students should be able to better understand scarcity, supply and demand, market structures, the role of government, money and the role of financial institutions, economic stabilization and cycles, investing and financial markets, and consumer credit.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR: Fire Science

FIR-124 Building Construction

This course provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-127 Fire Behavior and Combustion

This course explores the theories and fundamentals of how and why fires start, spread, and how they are controlled.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-130 Fire Prevention

This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation, and fire and life-safety education.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-139 Fire Fighter I

After completing the course the student will have met the sections required for a Firefighter I in the NFPA® 1001, Standard for Fire Fighter Professional Qualifications, and the requirements for National Fire Protection Association's (NFPA) 472, Standard for Professional Competence of Responders to Hazardous Materials Incidents for the for the Awareness and Operational Levels.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Course Type: Technical

FIR-145 Strategy and Tactics

This course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-149 Fire Protection Hydraulics and Water Supply

This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-152 Fire Protection Systems

This course provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special fire hazard suppression systems, water supply for fire protection, and portable extinguishers.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-158 Fire Officer I

This course is designed to meet NFPA 1021, Standard for Fire Officer Professional Qualities, for Fire Officer I. Throughout this course, students will participate in various classroom activities and exercises designed to reinforce the lectures. Topics will include the company officer's role, effective communications, management of resources, leadership, personnel safety, fire prevention, and investigation and planning. Students will be required to complete a class project that will be due within 2 months after conclusion of the course.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in FIR-139.

Course Type: Technical

FIR-160 Fire Inspector I

This course is designed to provide a basic understanding of fire prevention and fire inspection efforts. Students will develop a basic understanding of fire prevention; administration of codes and standards; impact of fire behavior on buildings; building construction; fire detection and protection systems; identification and correct of hazards; and field inspections.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in FIR-124.

Course Type: Technical

FIR-200 Occupational Safety/Health in Emergency Services

This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, and technical rescue. Upon completion of this course, students should be able to establish and manage a safety program in an emergency service organization.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-213 Principles of Emergency Services

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-214 Legal Aspects of Emergency Services

This course introduces the Federal, State, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-235 Fire Investigation I

This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the fire-setter, and types of fire causes.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-236 Fire Investigation II

This course is intended to provide the student with advance technical knowledge on rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and testifying.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in FIR-235.

Course Type: Technical

FIR-291 Fire Fighter II Certification

After completing the course the student will have met the sections required for a Firefighter II in the NFPA® 1001, 2013 edition, Standard for Fire Fighter Professional Qualifications. Students who successfully complete the certification process will be certified as a Firefighter II.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in FIR-139.

Course Type: Technical

FIR-300 Principles of Fire and EMS Administration

This course introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics, and leadership from the perspective of the company officer.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in FIR-213.

Course Type: Technical

FIR-322 Hazardous Materials: Operations Level

Hazardous Materials Operations level follows the requirements of NFPA 472 for the standard for competence of responders to hazardous materials/weapons of mass destruction incidents.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): Minimum grade of C- in FIR-139.

Course Type: Technical

FIR-335 Fire Instructor I

This course will focus on the presentation skills that new instructors need to deliver prepared lesson plans. Upon successful completion of this course, students will be eligible to attempt the State of Iowa Fire Instructor I certification exam.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in FIR-139.

Course Type: Technical

FIR-400 Emergency Safety and Survival

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

FIR-655 Fire Science Capstone

Students who have completed all required courses will complete a field internship with an approved Fire Department during this course.

Credit Hours: 2 Co-op Hours: 128

Prerequisite(s): A minimum grade of C in FIR-291.

Course Type: Technical

FLF: Foreign Language — French

FLF-145 French I

This course is an introduction to the basic vocabulary and key structures of the French language. The course will help students develop the four basic skills of listening, speaking, reading, and writing and will provide the beginning steps toward the acquisition of the French language. The course also focuses on making the student more culturally aware.

Credit Hours: 5 Lecture Hours: 80

Course Type: General Education / Transfer

FLF-245 French II

This course continues to introduce basic vocabulary and key structures of the French language. The course will help students to continue to develop the four basic skills of listening, speaking, reading, and writing and will provide additional steps toward the acquisition of the French language. The course continues to focus also on making the student more culturally aware.

Credit Hours: 5 Lecture Hours: 80

Prerequisite(s): FLF-145.

Course Type: General Education / Transfer

FLS: Foreign Language — Spanish

FLS-128 Conversational Spanish

Elementary speaking skills used in everyday conversations. Progresses toward the ability to converse in more varied and complex settings. Not for students who plan to major in foreign language.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

FLS-131 Elementary Spanish I

This course is student-centered and introduces the four phases of the Spanish language: speaking, listening, reading, and writing. Concepts of vocabulary and grammar are introduced to develop a low beginner's level of the Spanish language. Cultural and geographic aspects of the Spanish-speaking world will introduce traditions and customs.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

FLS-132 Elementary Spanish II

This course is a continuation of Elementary Spanish I and will use the communicative approach to expand basic language skills for comprehension of spoken and written Spanish. Students will be exposed to activities involving cultural diversity of the Spanish-speaking people.

Minimum grade of C- in FLS-131.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

FLS-231 Intermediate Spanish I

This course reviews essential grammatical elements in the language and introduces new topics as a continuation of the first year of Spanish. Instruction will enable learners to further develop proficiency in speaking, listening, writing, reading, and cultural understanding of Spanish-speaking countries.

Minimum grade of C- in FLS-132.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

FLS-232 Intermediate Spanish II

This course promotes further linguistic development as a continuation of Intermediate Spanish I. Instruction will expand nuances of the Spanish culture while increasing grammatical proficiency and spontaneous vocabulary usage.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Minimum grade of C- in FLS-231.

Course Type: General Education / Transfer

GEO: Geography

GEO-121 World Regional Geography

This introductory course builds an understanding of the physical and social aspects of geography by examining the major regions of the world and their connections. This will be accomplished by a geographic regional "tour" of the world examining the basic relationship between the physical environment and the cultural aspects within these regions.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

GEO-131 Physical Geography

An introduction to one of the major sub-fields of geography. Physical geography is the study of how and why physical phenomena vary spatially at and near the earth’s surface. This course will emphasize describing the spatial distribution of the earth’s natural features, patterns of solar energy receipt, atmospheric pressure, winds and precipitation around the earth. Introductory laboratory exercises complement the lecture.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

GEO-132 Physical Geography Lab

An introductory laboratory course to complement GEO-131 Physical Geography. The course explores the concepts, resources, and specialized methods necessary to understand the major elements of Physical Geography.

Credit Hours: 1 Lab Hours: 32

Pre/Co-requisite(s): GEO-131.

Course Type: General Education / Transfer

GRA: Graphic Design

GRA-105 Drawing and Composition

This course provides students with the experience of creating hand drawn art using a variety of drawing mediums, tools and techniques. Emphasis is placed on the fundamentals of drawing, artistic expression, artistic perception, visual organization, and composition. Articulating viable design concepts and solutions for common graphic design problems through drawing will be presented.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

GRA-124 Electronic Illustration

This course provides students with the experience of creating vector graphics for print media. Emphasis is placed on rendering digital artwork using Adobe Illustrator. Various 2D and 3D illustration drawing techniques along with creating intricate vector type and type effects will be presented.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): GRA-133.

Course Type: Technical

GRA-133 Desktop Publishing

This course provides students with the experience of producing and preparing various types of page layout and design formats for print media. Emphasis is placed on building print ready publications using Adobe InDesign. Desktop computer setup, color management, project management, and printing technologies will be presented.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

GRA-142 Graphic Imaging

This course provides students with the experience of producing and preparing raster graphics for print media. Emphasis is placed on generating print quality photographic imagery using Adobe Photoshop. Image acquisition, color management, color correction, retouching, extracting, layering, compositing, and painting techniques along with creating raster type effects will be presented.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): GRA-133.

Course Type: Technical

GRA-160 Interactive Multimedia

This course provides students with the experience of delivering dynamic content to a consumer. Emphasis is placed on producing interactive media via visual storytelling, personalized content, layered information, and/or two-way interaction platforms. An introduction to presentation, animation, dynamic pdf, data merge, e-mail newsletter, and augmented reality software will be presented.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in GRA-124, GRA-133, and GRA-142.

Course Type: Technical

GRA-162 Web Page Graphics

This course provides students with the experience of producing and preparing raster and vector graphics for screen display. Emphasis is placed on generating quality website graphics using Adobe Photoshop, Adobe Illustrator, and other emerging technologies. Incorporating, sizing, positioning, and styling responsive high-density web page graphics into a website will be presented.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in GRA-124 and GRA-142.

Course Type: Technical

GRA-196 Design and Layout I

This course provides students with the experience of designing single page layout formats for print media. Emphasis is placed on making effective design and layout decisions to visually communicate information to a targeted audience. An introduction to the Graphic Design profession, design process, elements of design, principles of design, and typography will be presented.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of D- in GRA-133.

Course Type: Technical

GRA-197 Design and Layout II

This course provides students with the experience of designing single-page double-sided multi-panel print publications. Emphasis is placed on projects such as brochure, leaflet, pamphlet, folder, album cover, and/or dust jacket design and layout. An introduction to spot color, layout grids, folds, die cuts, single-page-multi-panel construction, and duplex printing will be presented.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of D in GRA-196 and GRA-133.

Course Type: Technical

GRA-205 Design and Layout III

This course provides students with the experience of designing brand identity elements and multi-page print publications. Emphasis is placed on projects such as logo, business card, letterhead, style guide, newsletter, magazine, and/or catalog design and layout. An introduction to signature construction, style sheets, auto page numbering, finishing, and binding will be presented.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of D in GRA-124, GRA-197, and GRA-142.

Course Type: Technical

GRA-206 Advanced Design and Layout

This course provides students with the knowledge and experiences needed to design an effective advertisement used to promote a product, service, or event. Emphasis is placed on advertising and advertisement formats and design for print media. Digital visual advertising media will be discussed.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C in GRA-205.

Course Type: Technical

GRA-221 Principles of Illustration

This course provides students with the experience of creating hand drawn illustration art using a variety of mediums, tools and techniques. Emphasis is placed on producing illustrations that will clarify, enhance, illuminate, or demonstrate the message of written text. Illustration approaches and Illustrating for various types of publications will be discussed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in GRA-105 or ART-133 and ART-134.

Course Type: Technical

GRA-232 Photo Direction

This course provides students with the experience of directing a photographer during a commercial photo shoot. Emphasis is placed on communication between a graphic designer and commercial photographer. An introduction to the basics of digital photography, photography studio setup and lighting, digital camera operation, and still photography for advertising design will be presented.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

GRA-238 Web Design and Layout

This course provides students with the experience of designing and developing a static Website. Emphasis is placed on making effective web design and layout decisions that comply with current web development standards. An introduction to the web design process, HTML and CSS programming languages, search engine optimization, and website hosting will be presented.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: Technical

GRA-239 CMS Web Design

This course provides students with the experience of designing and developing a dynamic Website. Emphasis is placed on utilizing open source Web Content Management System (CMS) software to build a website. CMS installation, page and post construction, navigation deployment, plugins, widgets, theme design, and site administration will be presented.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in GRA-238.

Course Type: Technical

GRA-290 Portfolio Preparation

This course provides students with the knowledge and experiences needed to find gainful employment in a graphic design and web design related occupation. Emphasis is placed on developing a quality resume, portfolio development, job search strategies, and interviewing skills.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in GRA-205.

Course Type: Technical

GRA-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

Can be taken for 1 – 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

GRA-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course can be repeated with different content for credit.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

GRA-932 Internship

This course provides students with an opportunity to pursue career-related work experience. Internships are on-site and under the direction of an experienced professional. An internship learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course can be repeated with different content for credit.

Credit Hours: 1 Co-op Hours: 64

Course Type: Technical

GRA-949 Special Topics

This course provides students with an opportunity to earn credit for specialized study or project under the supervision of a faculty member. The topic of study may not duplicate any topic listed within any active program course. This course can be repeated with different content for credit.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

HCM: Hospitality, Culinary Arts, and Management

HCM-205 Dinner and Front of the House

This is a capstone, project-driven course where all of the students will complete the entire planning process and execution of a formal dinner event.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

HCM-240 Menu Planning and Design

This course applies the principles of menu planning and layout to the development of menus for a variety of types of facilities and service. The course will also examine the kitchen design, and facility layout.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

HCM-242 Event Planning and Customer Service

This course will cover all aspects of event planning and customer service relating to the restaurant and hospitality fields. Student will engage in a hands on learning experience of dealing with real life customers and planning events such as company parties, graduations, and wedding receptions.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

HCM-249 A la Carte Cooking Lab

A la Carte Cooking Lab introduces students to line cooking skills for fine dining as well as time budgeting and management. Students work in stations which include salads, broiler, sauté, expeditor, and preparation. Students plan and prepare upscale theme menus. (0/12)

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Course Type: Technical

HCM-251 Purchasing, Receiving, and Inventory

Studies principles in purchasing, receiving, issuing and inventory management. Emphasizes cost management techniques. Students practice skills in a clinical lab experience supervised by the purchasing manager.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in MAT-772. A minimum grade of D- in HCM-309.

Course Type: Technical

HCM-309 Hospitality Safety and Sanitation

Studies basic principles of bacteriology, food borne illness, sanitation, workplace safety, personal hygiene, food security, health regulations and inspections. Emphasizes the importance of sanitary equipment and facilities, and pest control. This course includes instruction in preparation for ServSafe Certification and Certified Pool Operator (CPO). Students will complete certification examinations for both areas.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

HCM-336 Event Planning and Customer Service 1

This course will cover all aspects of event planning and customer service relating to the restaurant and hospitality fields. Student will engage in a hands on learning experience of dealing with real life customers and planning events.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

HCM-341 Catering and Banqueting

This course reinforces skills specific to banquet and catering preparation and service. Emphasis is on quality, quantity, setup, timing, service, event planning, and execution of catering and banquet techniques.

Credit Hours: 2 Lecture Hours: 0 Lab Hours: 64

Course Type: Technical

HCM-593 Restaurant Management

Principles of modern restaurant and food service management is studied. Preparation for effective management through studies in purchasing, storage, inventory, food service equipment, menu design, marketing, and food service operations are stressed. Introduces the principles of modern restaurant and food service management: purchasing, storing, inventory, food service equipment, menu design, restaurant design and food service operations.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Course Type: Technical

HCM-605 Hotel Administration

A management course that introduces the student to advanced studies of property management, catering, sales, legal aspects, security and maintenance of all departments of the hotel.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

HCM-608 Introduction to Hospitality

Introduction to the food service, lodging, and tourism components of the hospitality industry. Background information, current issues, resume writing, and future challenges in various segments of the industry.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

HCM-905 Hospitality Internship

This course will provide students with an opportunity to gain hands on experience in the hospitality industry. This course can be taken for 3–5 credit hours.

Can be taken for up to 5 credit hours.

Credit Hours: 3 Co-op Hours: 192

Prerequisite(s): A minimum grade of C- in HCM-608 and HCM-605.

Course Type: Technical

HCR: Heating and Air Conditioning

HCR-115 Residential Heating Systems

The purpose of this course is to introduce the student to the various types of residential heating systems. Areas and concepts covered include combustion theory, basic air distribution, furnace construction, filters, humidifiers, installation techniques, and maintenance procedures.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Course Type: Technical

HCR-137 Hydronic Heating Systems

To provide experiences in the operation, layout, selection, and troubleshooting of residential and light commercial boilers.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

HCR-143 Alternative Heating and Cooling Systems

This course is designed to introduce students to new and alternative air conditioning equipment.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Course Type: Technical

HCR-171 Refrigeration

This course focuses on all thing's refrigeration, from small dehumidifiers to large commercial refrigeration. In this course the students will also study for and take the EPA 608 refrigeration licensing exam.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

HCR-181 Introduction to HVACR

The HVACR course will introduce students to the environmental function control of temperature, moisture content, air quality and air circulation in a conditioned space. Our labs allow the learner to view and examine various types of HVACR systems with respect to installation, components, and characteristics.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

HCR-200 Manual J and D HVAC Design

The Manual J and Manual D Residential HVAC Design course will provide students with the necessary skills to analyze a building's heating and cooling loads and design appropriate ductwork systems. Students will begin the process using manual worksheets and then finish by using Manual J and Manual D software programs.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C in CON-102.

Course Type: Technical

HCR-204 Principles of Air Conditioning

To provide a working knowledge of electrical controls, sealed system components, troubleshooting, and maintenance on air conditioners.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Course Type: Technical

HCR-264 Applied Practices

This course provides the students a capstone opportunity to apply the theory to practice on the equipment in the HVACR lab to gain entry level proficiency in service and repair.

Credit Hours: 3 Lab Hours: 96

Course Type: Technical

HCR-429 HVAC App Controls with Automated Systems

This course is a study of electronic controls and circuitry systems for H.V.A.C.R.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

HCR-455 Applied Electricity for HVACR

This course presents the basic electrical characteristics, reading and developing circuit graphics, test equipment, controls and circuit application.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Course Type: Technical

HCR-456 Applied Electricity II

This course expands on the basic electrical knowledge gained in HCR-455 and introduces students to electrical troubleshooting.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Course Type: Technical

HCR-933 Internship — Air Conditioning

This course provides on-the-job training giving the student experience and practical application of the competencies learned in the air conditioning portion of the Air Conditioning, Heating, and Refrigeration Program. The internship is coordinated by the college instructor and supervised by an industry professional at the work site.

This course can be taken for 1–4 credits, 64–256 co-op hours.

Credit Hours: 1 Co-op Hours: 64

Course Type: Technical

HEQ: Heavy Equipment

HEQ-109 All Terrain Lifts Operation

The All-Terrain Lifts Operation Course will give students access to the hands-on operation of all-terrain lifts and platforms used in the construction industry. Students will be able to develop the motor skills and competencies necessary to safely operate equipment in all sorts of workplace settings and environments. Students will gain practice in operating by completing exercises in moving materials, loading and unloading materials from trucks, and operating the work platform safely in all types of terrain and jobsite conditions. Students will demonstrate proper inspection, start up, operating and shut down procedures on a daily basis. Students will obtain an OSHA Certificate in Fork Lift Operation as part of this program.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of D in CON-108 or HEQ-203.

Course Type: Technical

HEQ-110 Support Equipment Operation

The Support Equipment Operation Course will introduce students to various types of mechanized machines and devices used on jobsites. Types of equipment include plate compactors, tampers, portable air compressors, jack hammers, concrete buggies, power trowels, concrete saws, and others. Students will gain practice in the safe operation and care of these types of machines.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of D in CON-108 or HEQ-203.

Course Type: Technical

HEQ-116 Basic Construction Equipment Operation

The Basic Construction Equipment Operation Course will provide students with the knowledge of basic requirements and skillsets necessary to become entry level equipment operators in the construction industry. Students will explore the various types of equipment and unique operating characteristics of each. Students will use Construction Equipment Simulators to develop basic operating skills.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in CON-108 or HEQ-203.

Course Type: Technical

HEQ-118 Routine Service and Repair

This course will assist students in the basic knowledge and skills necessary to perform routine maintenance and repairs on different types of construction equipment. Individual component and systems service intervals will be discussed and analyzed. Students will receive practice in fluid and filter replacing as well as recognizing, troubleshooting, replacing and repairing defective and worn components and parts. The need for ongoing operator input and involvement in the maintenance process will be explored

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of D in HEQ-203.

Course Type: Technical

HEQ-190 Introduction to Utility Equipment Operations

The Utility Equipment Operations Course will introduce students to the machines used in the residential construction industry when working in close proximity to buildings, underground utilities and job-sites with limited operational space. Pre-operation inspections, methods of loading and securing equipment for transport and safe operations will also be discussed.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): Minimum grade of C in CON-108.

Course Type: Technical

HEQ-200 Utility Equipment Operations

The Utility Equipment Operations Course will allow students to operate machines used in the residential construction industry when working in close proximity to buildings, underground utilities and job-sites with limited operational space. Pre-operation inspections, methods of loading and securing equipment for transport and safe operations will also be discussed.

Credit Hours: 1 Lecture Hours: 0 Lab Hours: 32

Prerequisite(s): Minimum grade of C in HEQ-190.

Course Type: Technical

HEQ-203 Jobsite Safety

The Jobsite Safety course will introduce students to numerous requirements, hazards, certifications, personal protective equipment, and machine mounted safety equipment, which relate to operating equipment and being present on various work locations in the construction industry. Students will be introduced to the National OSHA Safety Standards required of the general construction industry. Students will complete the classroom and hands on Laser Safety Training portion of the OSHA Regulations. Students will practice the proper techniques using and inspecting personal protective equipment required in the construction field. Upon successful completion of this course students will receive the 10-hour OSHA General Construction Certificate and the OSHA Laser Safety Certificate.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

HEQ-208 Equipment Operation I

The Equipment Operation I Course will introduce students to preoperational inspection, and basic safe operation of various machines used by the construction industry. Experience and skills will be developed using track and rubber wheeled equipment to complete exercises in moving materials, grading, leveling, trenching, and loading trucks, Students will demonstrate proper inspection, start up, operating and shut down procedures on a daily basis. The use of PPE and safe professional operating procedures will be followed daily.

Credit Hours: 5 Lecture Hours: 16 Lab Hours: 128

Prerequisite(s): A minimum grade of D in HEQ-203.

Pre/Co-requisite(s): A minimum grade of D in HEQ-116.

Course Type: Technical

HEQ-209 Equipment Operation II

The Equipment Operation II Course will assist students in using skills developed to layout and complete earth moving projects in a real world environment. Students will review site plans, obtain permits, identify water runoff paths, survey, place grade stakes, use the One Call Service, calculate material needs, and other requirements to prepare a jobsite for excavation. Students will coordinate the use of machines and equipment needed for the projects. The use of PPE and safe professional operating procedures will be followed daily.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in HEQ-116, HEQ-203, and HEQ-208.

Course Type: Technical

HEQ-210 Equipment Operation III

The Equipment Operation III Course will use student skills developed in prior coursework to complete projects using various equipment. Students will build on prior skills to complete more advanced and technical maneuvers. Finish grading, seeding, and placement of permanent erosion barriers will be practiced. Focus will be on operating to industry professional standards and abilities to prepare students for employment.

Credit Hours: 4 Lab Hours: 128

Prerequisite(s): A minimum grade of D in HEQ-203, HEQ-116, and HEQ-208.

Pre/Co-requisite(s): A minimum grade of D in HEQ-209.

Course Type: Technical

HEQ-214 Equipment Maintenance

This course will assist students in the basic knowledge and skills necessary to perform maintenance and repair components and systems found on construction equipment. Individual component and systems repair will be discussed and practiced. Students will gain hands-on practice in testing and repairing construction equipment components. Basic welding and flame cutting will be introduced.

Credit Hours: 5 Lecture Hours: 32 Lab Hours: 96

Prerequisite(s): A minimum grade of D in HEQ-203.

Course Type: Technical

HEQ-907 Workplace Experience

This course provides students with opportunities to gain on-the-job experience in the construction industry. Students will gain experience and appreciation of qualities and skills needed for success in the equipment operating field. Coordination and guidance will be provided by department instructors.

Credit Hours: 5 Co-op Hours: 320

Prerequisite(s): A minimum grade of D in HEQ-203, HEQ-116, HEQ-118, HEQ-201, HEQ-208, HEQ-209, and HEQ-210.

Pre/Co-requisite(s): A minimum grade of D in HEQ-214, HEQ-109, and HEQ-110.

Course Type: Technical

HIS: History

HIS-117 Western Civilization I: Ancient and Medieval

Western Civilization I traces the development of Western Civilization from prehistory to 1300 C.E., the end of the High Middle Ages. The role of the Humanities is emphasized. The course explores major political, social, economic, scientific, intellectual, cultural, and religious developments contributing to Western societies. These include the significant events and contributions of early Middle Eastern civilizations, classical and Hellenistic Greece, the Roman Empire, its successors, the rise of the Western Christian church, and Medieval Europe.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HIS-118 Western Civilization II: Early Modern

Western Civilization II surveys the development of Western Civilization, covering the end of the High Middle Ages of Europe to the French Revolution. The role of the Humanities is emphasized. The course will examine the major political, social, economic, intellectual, cultural, and religious developments contributing to the emergence of modern Western European Society. This includes the significant events and contributions of the Renaissance, the Reformation, the Columbian exchange, the Scientific Revolution, and the Enlightenment.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HIS-119 Western Civilization III: The Modern Period

Western Civilization III will continue exploring the development of Western Civilization, covering the period from the French Revolution until the present. The role of the Humanities is emphasized. The course will examine the major political, social, economic, intellectual, cultural, and religious developments contributing toward Western Society. Included are such major developments as the industrial revolution, the French revolution, Romanticism, European colonialism, World War I, World War II, the Cold War, the new European order, and the world of the Twenty-first Century.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HIS-151 U.S. History to 1877

This United States history course examines the country's Colonial experience, Revolutionary period, and 19th Century history through Reconstruction. The course includes political, economic, and social history of this period, as well as the development of American thought.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HIS-152 U.S. History Since 1877

This United States history course examines the period from the end of reconstruction to the present. Emphasis is placed upon industrialization and its impact, the development of a strong federal government, an aggressive foreign policy, and a growing involvement in an international economy. The course includes political, economic, and social history of this period, as well as the development of American thought.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HIS-201 Iowa History

This history course is a survey of social, political, economic, and cultural developments in Iowa from prehistoric times to the present.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HIS-204 Rock to Hip Hop — A History

This introductory course is a study of the evolution of Rock & Roll as well as other popular genres from the 1950's to the present and how historical events impacted the music. This musical history will be traced from its fusion of African-American, white, and Latin music traditions in America to its present state as an internationally diverse musical style. The course will examine the historical relationship between the music of the period and political and social trends as well as events of the era.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HIS-251 U.S. History 1945 to Present

This United States history course examines the American experience from the end of World War II to the present. This course will include the political, diplomatic, intellectual, economic, and social history of the period.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in HIS-152.

Course Type: General Education / Transfer

HIS-257 African American History

This course examines the experiences of African-American society in the United States from origins in Africa to the present.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HIS-277 History of Women in the U.S.

This course explores U.S. history from the perspective of women. Topics include women's roles, contributions, and challenges in political, economic, familial, religious, and social life. Central to the course is the intersection of gender with race, class and other social identities in shaping the diverse historical experiences of women. Also key is the influence of women on American intellectual thought, and their enhanced participation in electoral politics.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HIS-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

HIS-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

HIS-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. Can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

HIT: Health Information Technology

HIT-125 Essentials of Health Records

This course familiarizes students with the origin, uses, content and format of health records, including both paper and electronic health records. It covers required standards for health records, organization of records, and analysis of health record data.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

HIT-215 Introduction to CPT

Introduces the use of the CPT classification system with emphasis on coding in the physician's office for reimbursement purposes.

Credit Hours: 2 Lecture Hours: 32

Pre/Co-requisite(s): Minimum grade of C- in HSC-116.

Course Type: Technical

HIT-240 Advanced Coding and Classification

Enables students to accurately apply more advanced ICD-CM codes to diseases and procedures in compliance with reimbursement and prospective payment system guidelines with use of coding resources.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D- in HIT-250.

Course Type: Technical

HIT-250 Coding I

This course introduces the concepts necessary for entry-level coding of diseases, injuries, and hospital procedures.

Credit Hours: 3 Lecture Hours: 48

Pre/Co-requisite(s): Minimum grade of C- in HSC-116.

Course Type: Technical

HIT-280 CPT-4 Coding

Continues more complex concepts of procedural coding utilizing the Current Procedural Terminology, 4th Edition (CPT-4) classification system. Includes practical application of coding outpatient/ambulatory records.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D- in HIT-215.

Course Type: Technical

HIT-290 Reimbursement Methods

During this course, you will examine reimbursement methodologies, including prospective payment, utilized in a variety of health care settings. You will explore data quality for optimal reimbursement, data auditing, and compliance processes. You will also be introduced to billing procedures and requirements for claims submissions.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

HIT-352 Health Information Systems

Course will examine the development of the electronic health record in the management of health care. Explores common computer and networking terminology and guidelines for selection of and security implementation in the EHR.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

HIT-450 Health Statistics

This course covers the collection, analysis, verification and display of health statistics. Students will learn uses for health statistics, basic statistical principles, commonly computed rates, vital health statistics, uniform reporting requirements, and research fundamentals.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

HIT-510 Coding Certification Review

The nature of this revision is to align the student learning outcomes to the new format.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

HSC: Health Science

HSC-108 Introduction to Health Professions

This course introduces the student to the healthcare system and provides an opportunity to explore a wide variety of health careers/professions. Students will explore ethical and legal responsibilities within the healthcare system including expectations for professional behavior. This course will allow for certification in common healthcare requirements.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

HSC-113 Medical Terminology

This course presents the foundation necessary to develop a basic medical terminology vocabulary. Emphasis on the components of terms as related to each body system will be provided. The course further provides the student with the opportunity to properly spell, pronounce and utilize medical terms in relation to pathological conditions, tests, and procedures. Common medical abbreviations will also be discussed for each system.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

HSC-116 Beginning Medical Terminology

This course introduces the concepts necessary for building a basic medical vocabulary and studies the anatomy and physiology, common diseases and surgeries of the body systems.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

HSC-124 Advanced Medical Terminology

The course continues to build a medical vocabulary through the study of anatomy and physiology, common diseases and surgeries of the body systems.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): A minimum grade of C- in HSC-116.

Course Type: Technical

HSC-168 Nurse Aide

Required to meet the training requirements for nurse aides in long-term care facilities. Emphasizes achievement of a basic level of knowledge and demonstration of skills to provide safe and effective resident care. Integrates 30 hours of clinical, outside of normal class times, at a long-term care facility under the supervision of an RN. Requires your own transportation.

Credit Hours: 3.5 Lecture Hours: 32 Lab Hours: 16 Clinic Hours: 48

Course Type: Technical

HSC-217 Introduction to Pathology

Introduces the study of pathology. Includes description, etiology, signs and symptoms, diagnostic procedures, current medical treatment, progress and prevention of disease in each body system, with emphasis on basic concepts and terminology.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

HSV: Human Services

HSV-109 Introduction to Human Services

Introduces the value base of human services and evaluates problems that can be encountered in working with people when these values conflict with client needs. Introduces the framework of human services approach, specifically information of individual values, systems analysis, problem solving and conflict resolution. Concepts of systems analysis are accompanied by application of these concepts to problems.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HUM: Humanities

HUM-130 Holocaust Perspectives: Confronting the Future

The Holocaust, or Shoah, will be studied from a combination of historical, sociological, scientific, literary, and artistic approaches. The course will examine how this Twentieth Century genocide was used as a technique of political control and racial persecution. It will also look at the causes and functions of the Holocaust to draw parallels to the current resurgence of similar events and ideologies based on race, religion, and other prejudices.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HUM-141 J.R.R. Tolkien: Mythology and Methodology

This course will explore the major fiction and non-fiction works of Tolkien, paying special attention to themes drawn from the humanities. This course will be interdisciplinary and draw upon a range of liberal arts methodologies and specializations in its presentation.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

HUM-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for 1 – 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

HUM-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

HUM-949 Special Topics

This course offers a specialized study or project under the supervision of a faculty member. It may not duplicate any course already in the catalog. Students earn credit based upon the agreed upon credit and contact hours. This course may be repeated for credit with different content. This course may be taken for 1-3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

IND: Industrial Technology

IND-100 Basic Mechanical Systems

This course provides the student with introductory knowledge, skills in use of tools, and components by mechanics.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

IND-111 Industrial Safety Mechanical Systems

This course provides students with information required to understand industrial safety issues and procedures. Studies include job hazard awareness, lock-out/tag-out, egress, fire extinguishers, OSHA 10, material handling, and Globally Harmonized System of Classification and Labeling of Chemicals (SDS Sheets).

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

IND-145 Mechanical Power Transfer

This course provides the student with the knowledge and skills necessary to troubleshoot maintain and repair mechanical power systems. Such as bearings, gears, clutches, belts and seals.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in IND-100.

Course Type: Technical

IND-153 Industrial Mechanics

This course will introduce the skills necessary to troubleshoot, maintain, and repair mechanical power systems, such as mechanical power transmissions systems, couplings and shafts, lubrication on these systems, maintenance and installation of seals and gaskets, and installation and adjustment of clutches and brakes.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

IND-157 Introduction to Computers

This is an introductory course in the use of a personal computer. Students will gain a general understanding of computer hardware and software. Students will be given hands-on experiences with operating system navigation, word processing and spreadsheet software, and industrial applications.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

IND-949 Special Topics

This course is designed for secondary industrial technology educators to develop and enhance knowledge and skills in specific emerging practices, issues, and technical content areas in the manufacturing industry.

May be taken for up to 6 credits.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

LIT: Literature

LIT-101 Introduction to Literature

This course studies multiple literary forms and genres. Students will be introduced to literary terminology, analysis and interpretation of literature, and a variety of authors and literary styles. Instruction will emphasize the process of reading to develop and interpret meaning and classroom discussions encouraging students to share interpretations. Students will also respond to literature through informal and formal written assignments that foster skill in analysis and interpretation.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in RDG-040 and ENG-061 or appropriate placement scores (Placement Reading 82 and Placement Writing 65)

Course Type: General Education / Transfer

LIT-133 Minority Voices in U.S. Literature

This course will explore the issues and themes developed in the literature written by minority authors, often underrepresented in the traditional literary canon. We will focus on works by various dispossessed groups, including African-Americans, Asian-Americans, Latinx, Native Americans, Lesbians/Bisexuals/Gays/Transgender Individuals, and Women. Genres to be read will include short stories, poetry, and novels with emphasis on the ideas and issues shared in common by the various silenced groups and the unique perspective of each.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

LIT-142 Major British Writers

This course is an introduction to the study and appreciation of major British writers from the Anglo-Saxon era through the contemporary period. Basic critical approaches are emphasized.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

LIT-145 Shakespeare:Dramatist,Psychologist,Historian

This course will include a study of several plays by William Shakespeare, including tragedies, histories, and comedies. Study of these plays will start with an examination of the historical period, which provides both the context in which the plays were written and the settings within the plays. It will include discussions of the contributions of Shakespeare to Western civilization and humanity as a whole.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

LIT-160 Short Story/Novel

This course explores the short story and novel as meaningful literary forms, with emphasis on structure and technique. Students will be introduced to the elements of fiction, various literary genres, and their cultural and historical contexts incorporating materials with diverse voices. Students will analyze fiction critically in class discussions and through formal and informal writings.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

LIT-189 Women and Literature

Women and Literature examines the predominant ways in which women have been portrayed by both male and female writers. It will also focus on the effects these recurring images may have on expectations for real women.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

LIT-949 Special Topics

This course will explore literature focused on a specific theme, genre, or author; introducing the specified topic and seeking to develop appreciation of the selected literature. Selected topics may include but are not limited to: detective fiction, science fiction, short stories, regional writers, or the work of a specific author.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MAP: Medical Assistant

MAP-111 Medical Office Management I

This course provides an introduction to the administrative skills needed for a medical office. Students will learn information management, how to organize and maintain medical records, manage appointments, and perform routine office administration duties. Focus is on the financial aspects of the medical office including essential financial management concepts and procedures, medical office bookkeeping, cash control, accounts payable, accounts receivable, billing and collection procedures. The student will be prepared to work with commercial software, computerized medical records, billing, and patient scheduling. Communication skills are applied to deliver strong customer service. Ethical and legal rules concerning consents and the confidentiality of health information is presented with particular emphasis on the Health Insurance Portability & Accountability Act. Principles of legal liability, contracts, release of medical information, reporting, operation of the legal system and how it relates to the role of the office employee will be presented.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MAP-117 Medical Office Management II

This course covers advanced medical administrative procedures using insurance and billing software to determine physician reimbursement through accurate claim submission. Topics including maintaining files, entering patient data, inputting insurance, posting transactions, and generating reports. Students will learn how to complete and submit electronic and paper insurance claim forms, perform referrals, and apply the correct procedure and diagnostic codes. This course is designed to teach students to correctly complete the universal Form CMS-1500 (Health Insurance Claim Form) and the coding rules for the Current Procedural Terminology (CPT) , International Classification of Disease, Clinical Modification (ICD-10-CM) and HCPCS level II coding systems (products, supplies, and services not included in the CPT codes, such as ambulance services and durable medical equipment, prosthetics, orthotics, and supplies (DMEPOS) when used outside a provider’s office), and then apply the rules to code patient services, medical billing and insurance claims. A variety of payment systems and other topics of Medicare fraud/abuse, Health Maintenance Organizations (HMOs), Preferred Provider Organizations (PPOs) and patient-centered medical home (PCMH) and other legal acts are also reviewed. Compliance reporting will be addressed.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in MAP-111.

Course Type: Technical

MAP-123 Administrative Medical Office Procedures

Administrative Medical Office Procedures provides the students with the knowledge and skills needed to work with patients, patient records, and manage other administrative responsibilities in the medical office.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C- HSC-116.

Course Type: Technical

MAP-132 Medical Transcription

This course continues to build and strengthen skills involving grammar, punctuation, spelling, and use of reference materials by transcribing a variety of medical reports.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

MAP-225 Med Lab Procedures I

This course introduces the role of the medical assistant in performing diagnostic procedures, laboratory techniques, collecting, processing, and testing specimens. Students will demonstrate competency in the theory and practice of bloodborne pathogen standards, OSHA, safety in the laboratory, CLIA government regulations, quality assurance, microscope usage, urinalysis procedures, disinfection and sterilization procedures. Emphasis is on safety, infection prevention, proper patient identification, collecting, handling and labeling of specimens, processing, accessioning, and quality assurance. Point of Care Testing (POCT) for waived laboratory procedures, inventory control and management to efficiently maintain the laboratory are also studied.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of C in MAP-111 and MAP-342.

Course Type: Technical

MAP-230 Medical Laboratory Procedures II

This course is an advanced laboratory introduction to medical diagnostic and laboratory techniques and offers skill development in a wide variety of low and moderately complex diagnostic procedures, microscopic and chemical analysis of blood. Students will develop skill in specimen collection on varying age groups and in using a variety of blood collection methods including; vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture. Topics covered will include hematology, body chemistry, microbiology, ABO/Rh test, immunology testing, and blood typing. Specimen collections with specialty examinations and diagnostic tests such as electrocardiograms, pulmonary function and throat cultures will be included.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): Minimum grade of C+ in MAP-111, MAP-225, and MAP-342.

Course Type: Technical

MAP-342 Clinical Assisting I

This course is designed to provide the basic clinical knowledge and skills necessary for the medical assistant to provide care, maintain safety and prevent infection. Maintaining asepsis, managing the clinical environment, basic patient interactions of varying ages, assisting with physical exams and testing will be included. Safe medication administration and knowledge, following all legal considerations, will be expected. This course focuses on diseases frequently diagnosed and treated in the medical office setting; and the associated anatomy and physiology. Diet and nutrition will be introduced with diseases, as applicable.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of C in MAP-111 and MAP-225.

Course Type: Technical

MAP-343 Clinical Assisting II

This course will provide an understanding of best practices in a medical office setting including infection control, risk management, preparing the patient for and assisting with examinations and treatments, and the management of supplies and equipment. Students will prepare and administer medications via several routes including oral, parenteral (excluding intravenous), transdermal, and inhalation. Emphasis is placed on safe and accurate administration and maintaining federal and state healthcare legislation and regulations. Students will demonstrate therapeutic communication and deliver patient-centered health promotion teaching plans meeting the specific nutritional needs. This course will provide the skills, within the medical assistant scope of practice, to provide first aid and volunteer effectively to respond to a disaster.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of C in MAP-342, MAP-111, and MAP-225.

Course Type: Technical

MAP-402 Medical Law and Ethics

Course will provide the student with the legal and ethical implications of practice in a medical setting. Issues covered will include scope of practice, confidentiality, HIPAA privacy and security requirements, legal terms and elements in the delivery of care, ethical guidelines of practice, and legal documentation requirements.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

MAP-511 Pharmacology for the Medical Office

The basic knowledge, understanding, and skills necessary to use common pharmaceutical references and spell commonly used drugs.

Credit Hours: 1 Lecture Hours: 16

Pre/Co-requisite(s): Minimum grade of C- in HSC-116.

Course Type: Technical

MAP-512 Medical Assisting Pharmacology

This course provides a basic background in the classification and understanding of drugs and their sources, uses and legal implications. This course will also provide discussion on the characteristics of typical drugs, side effects, precautions, interactions, and patient education of each category.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Minimum grade of C in MAP-111, MAP-225, MAP-342

Course Type: Technical

MAP-841 Medical Assisting Capstone

Within this course, the student will begin the job-seeking process and identify job opportunities. Students will create a personalized resume and cover letter, and successfully participate in mock job interviews. This course will provide students a systematic comprehensive review to prepare for the CMA (AAMA) Certification exam. Students will complete the application for the CMA (AAMA) Certification exam.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Minimum grade of C+ in MAP-111, MAP-117, MAP-225, MAP-230, MAP-342, and MAP-343.

Course Type: Technical

MAP-941 Medical Assistant Practicum

The practicum provides the students the opportunity to apply classroom theory to on the job experiences in a medical facility approved by the Practicum Coordinator. Primary objective is to provide students with a variety of experiences in the administrative, clinical and laboratory areas of an ambulatory care clinic. This opportunity allows the students to enhance communication skills by interacting with physicians, clinic staff and patients. Students are evaluated by the clinic supervisors and the practicum coordinator.

Credit Hours: 3 Co-op Hours: 192

Prerequisite(s): Minimum grade of C+ in MAP-117, MAP-230, MAP-343, and PNN-207.

Course Type: Technical

MAT: Mathematics

MAT-012 Math Skills

This course is designed for students who have not mastered the basic skills of arithmetic and basic applications. The course can also be individualized to cover different math concepts to meet student needs. This course can be repeated with different content for credit.

Credit Hours: 1 Lab Hours: 32

Course Type: Developmental

MAT-045 Fundamentals of Math

This course is designed to include the study of arithmetic operations on whole numbers, fractions, and decimals. The topics covered also include percent, ratio, proportions, and strategies for solving application problems.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): Appropriate placement scores or equivalent.

Course Type: Developmental

MAT-048 Preparatory Math for Elementary Algebra

This course is designed to include the study of arithmetic operations on whole numbers, fractions, decimals, and percent. The course also introduces basic algebra concepts, including simplifying and evaluating algebraic expressions and solving simple equations. Topics covered also include strategies for solving application problems, such as working with ratios, proportions, and formulas.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): Appropriate placement score.

Course Type: Developmental

MAT-052 Pre-Algebra

This course is designed to provide a review of basic math operations with whole numbers, integers, fractions, decimals, and percent. It also introduces basic algebra concepts including simplifying and evaluating algebraic expressions, solving simple equations, and applications.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D in MAT-045 or equivalent placement score.

Course Type: Developmental

MAT-060 Non-STEM Elementary Algebra

This course is designed to introduce basic algebra and intended for students who will follow the math pathway that leads to Math for Liberal Arts or Statistics. It is not intended for students heading towards a College Algebra pathway. Topics include real numbers, algebraic expressions, equations in one and two variables, graphing, systems of equations and applications.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Minimum grade of D in MAT-048 or MAT-052 or equivalent placement score

Course Type: Developmental

MAT-063 Elementary Algebra

This course is designed to provide students with an introduction to basic algebra. The topics covered include signed numbers, exponents, algebraic expressions, polynomials, factoring, linear equations and inequalities, systems of equations, graphing, and applications.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of D in MAT-048 or MAT-052.

Course Type: Developmental

MAT-102 Intermediate Algebra

This course will prepare the student for College Algebra and Trigonometry or other equivalent course work. Topics include properties of real numbers, linear and quadratic equations, graphs of polynomial functions, systems of equations, polynomial and rational expressions, inequalities, integral and rational exponents, radicals, and complex numbers.

Credit Hours: 4 Lecture Hours: 64

Course Type: General Education / Transfer

MAT-110 Math for Liberal Arts

This is a one semester, liberal arts mathematics course that satisfies the minimum general education requirement for math. The course is designed to impart math skills which are helpful in everyday life as well as to expose students to areas of mathematics they may not have seen before. Topics include problem-solving skills, set theory, algebra, consumer mathematics, probability, and statistics. Other topics may be included.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D- in MAT-063 or appropriate placement score.

Course Type: General Education / Transfer

MAT-112 Math for Elementary Teachers I

Math for Elementary Teachers I is the first of two mathematics courses for students who want to pursue a major in elementary education or early childhood teacher licensure. This course will use a variety of problem-solving skills while exploring many aspects of the real number system. Algebraic and concrete mathematical models will be incorporated in strategies used to solve problems.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Minimum grade of C- in MAT-063 or equivalent placement score.

Course Type: General Education / Transfer

MAT-118 Math for Elementary Teachers II

This course complements the content of MAT-112 Math for Elementary Teachers I. Emphasis is on problem-solving and applications. Topics include probability, statistics, and algebraic equations and graphs.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Minimum grade of C- in MAT-112

Course Type: General Education / Transfer

MAT-121 College Algebra

This course provides an intensified study of algebraic techniques and prepares students for future study in mathematics. The central theme is the concept of functions, their properties, graphs and applications. Functions studied include polynomial, rational, exponential, and logarithmic.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of C- in MAT-102 or equivalent placement score.

Course Type: General Education / Transfer

MAT-128 Precalculus

This one-semester pre-calculus course is intended for the student with a solid algebra background who intends to take calculus. It is also beneficial (but not required) for the student to have a background in trigonometry. The course will emphasize functions using an analytical, numerical, and graphical approach. The student will study linear, polynomial, rational, exponential, logarithmic and trigonometric functions along with their applications.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): Appropriate Placement Test Scores: ACT Math Score of 25 OR Compass Score of 51-100 in the College Algebra Domain or 31-50 in the Trigonometry Domain.

Course Type: General Education / Transfer

MAT-134 Trigonometry and Analytic Geometry

The second course of a two-semester pre-calculus sequence. Topics include trigonometry and applications, vectors, analytic geometry, and polar and parametric equations.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in MAT-121 or equivalent placement score.

Course Type: General Education / Transfer

MAT-156 Statistics

This course is a study of descriptive statistics including graphical representation, central tendency, correlation and regression, intuitive treatment of probability and inferential statistics including hypothesis testing.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): MAT-063.

Course Type: General Education / Transfer

MAT-210 Calculus I

The first in a calculus sequence, this course covers topics including functions and their graphs, limits, derivatives, applications of the derivative, and integrals.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of C- in MAT-128 or MAT-134 or appropriate placement scores (ACT: 27; COMPASS TRIGONOMETRY: 51-100).

Course Type: General Education / Transfer

MAT-216 Calculus II

A continuation of MAT-210, this course covers topics including integration techniques, applications of integration, infinite series, conic sections, parametric and polar equations.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of C- in MAT-210.

Course Type: General Education / Transfer

MAT-219 Calculus III

This course covers topics including integration and differentiation techniques related to vectors, vector-valued functions, functions of several variables, multiple integration, and vector analysis.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): MAT-216.

Course Type: General Education / Transfer

MAT-504 Electronics Math I

This course presents algebraic concepts, trigonometric concepts and problem solving as applied to electronics. Specific topics included are: algebraic mathematical operations, equations manipulation and solving, quadratic equations, systems of equations, determinants and matrixes, special products and factoring, graphing, trigonometric functions, solutions of triangles, exponents and radicals, complex number systems and elements of plane vectors.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): MAT-063 or appropriate placement score.

Co-requisite(s): ELT-291.

Course Type: Technical

MAT-514 Electronics Math II

This course presents logarithms as applied to electronics; number systems for computers, Boolean algebra, mapping and statistics as used in the electronic industry.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): MAT-504.

Course Type: Technical

MAT-741 Technical Mathematics I

This course is designed to provide students with the mathematical skills to succeed in technical programs. Topics covered will include algebraic operations, solving linear equations, ratios, proportions, unit conversions, functions, geometry, and introductory trigonometry.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D in MAT-063 or equivalent placement score.

Course Type: Technical

MAT-748 Technical Math II

The second of a two-course sequence designed to communicate the mathematics principles, concepts and manipulative skills needed for technical programs. Topics covered will include systems of equations, advanced trigonometry, vectors, polynomials, logarithmic and exponential functions.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D in MAT-741.

Course Type: Technical

MAT-764 Math for Welders

This course introduces the basic mathematics principles that are using in the welding and metal fabrication field. Topics include: whole numbers, common fraction, decimal fractions, measurement, percentages and the metric system. This course includes hands on measuring activities.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

MAT-772 Applied Math

This course is designed to present basic facts of arithmetic including whole numbers, fractions, decimals, powers, roots, English and metric measurement, ratio-proportion, percents, introduction to algebra, introduction to geometry, and applied statistics. Instruction includes use of scientific hand-held calculators and emphasis placed on critical thinking, problem solving skills.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MAT-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MAT-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MAT-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MFG: Manufacturing

MFG-107 Introduction to 3D Modeling

This course will introduce students to designing parts using AutoCAD Inventor software in addition to digitizer and 3-D printer technology. The course includes a basic overview of 3-D software capabilities applied to tooling design and precise machined parts.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

MFG-122 Machine Trade Printreading I

This course provides the student with the necessary knowledge to read and interpret basic prints used in the machining industry. It covers terminology, line-types, and drawing interpretation. First and third angle orthographic projection, dimensioning methods, and tolerancing are the major topics covered.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MFG-142 Geometric Dimensioning Tolerancing

This course introduces the student to the use of Geometric Dimensioning and Tolerancing. It consists primarily learning the names , meanings and application of the symbols used on engineering drawings that include GD&T.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): MFG-122.

Course Type: Technical

MFG-157 Introduction to CNC Programming I

In this course students will create basic programs for CNC mills. Student will use a plain ASCII text editor (like Notepad) to input basic industry standard G and M code programs. Programs are run on verification software to ensure accuracy. Speed and feed calculations, operator notes and start-up lines, mill tooling types and procedures, rectangular coordinates, canned (drill) cycles, and file management are other areas of study.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

MFG-158 Introduction to CNC Programming II

In this course students will create programs for CNC mills using cutter diameter compensation, sub-routines, and sub-programs. Students will also write start-up lines and basic level programs on CNC lathes. Students will use a plain ASCII text editor (like Notepad) to input basic industry standard G and M code programs. Programs are run on verification software to ensure accuracy. Lathe tooling, typical turning procedures, cutter nose radius compensation, and tip orientation are other areas of study.

Credit Hours: 2 Lecture Hours: 32

Pre/Co-requisite(s): A minimum grade of D in MFG-157 and MFG-302.

Course Type: Technical

MFG-193 Machine Shop Processes

This course is designed to develop basic skills in precision measurement and layout tools, machine operations for lathes, mills, drills and surface grinders.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

MFG-211 Basic Machine Theory

This course presents basic machining processes and concepts necessary to set-up and operate machine shop equipment.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

MFG-214 Advanced Machine Theory

Learn advanced machining processes and concepts used while operating machine shop equipment.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

MFG-222 Machine Operations I

An introductory machining course presenting basic machining operations. Student will perform basic operations on lathes, horizontal + vertical-milling machines, drilling machines, saws, various types of grinders, and precision measuring equipment.

Credit Hours: 4 Lab Hours: 128

Pre/Co-requisite(s): A minimum grade of D in MFG-211.

Course Type: Technical

MFG-228 Machine Operations II

This is an advanced hands-on machining course.

Credit Hours: 4 Co-op Hours: 128

Course Type: Technical

MFG-302 CNC Fundamentals

Covers computer numerical control (CNC) as it relates to milling machines, lathes, and related software. Emphasis on machine set-up and operation, inspection of parts, and communication of peripherals.

Credit Hours: 3 Lab Hours: 96

Course Type: Technical

MFG-309 CNC Programming Theory II

This course teaches mid-level CNC programming including canned/auto cycles, cutter compensation, and using subroutine + sub-programs. Machine capabilities such as mirror imaging, axis rotation, and part size scaling will be discussed. Students will draw basic part prints on our CAD/CAM software. Prints will be dimensioned and part drawings will be extruded into solids.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of D in MFG-157 and MFG-158.

Co-requisite(s): MFG-335.

Course Type: Technical

MFG-320 Computer Aided Machining

Computer-Aided Machining provides an opportunity to study all steps in the computer-aided design and computer-aided manufacturing processes. This includes drawing, dimensioning, creating solids, creating tool-paths, back-plotting, and program correction. Students utilize CAD/CAM software in creating and running functional CNC programs.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

MFG-335 CNC Operations

This course is similar to CNC Fundamentals except students will run Hawkeye's CNC lathes and machining centers individually, rather than in groups to prove individual understanding of CNC machine operation. Manual equipment will be utilized to perform secondary operations. Manual and CMM inspection equipment will also be experienced. Students will back-plot, set-up, and run unproven programs to ensure the student can find and correct CNC program errors.

Credit Hours: 3 Lab Hours: 96

Prerequisite(s): A minimum grade of D- in MFG-302, MFG-157, and MFG-158.

Course Type: Technical

MFG-364 Hydraulic Jigs and Fixtures

A course in building using blueprints, knowledge and skills developed in basic machine concepts and operations. Students are required to build and run jigs and fixtures working within the tolerance of the print.

Credit Hours: 4 Lecture Hours: 16 Lab Hours: 96

Prerequisite(s): A minimum grade of D in MFG-214 and MFG-228.

Course Type: Technical

MFG-365 General CNC Lathe Maintenance

This course is designed for the student who has little or no hands on training for CNC lathes. The course covers the separate subsystems and how they work together. Students will practice: preventive maintenance required to keep the machine running in top condition; diagnosis of problems using existing technical skills supplemented with the training manuals provided with this course. Students will become familiar with the machines' self-checking diagnostics, and how to proceed with troubleshooting and repair as recommended by the manuals or the equipment distributor's service staff.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

MFG-366 General CNC Mill Maintenance

This course is designed for the student who has little or no hands on training for CNC mills. The course covers the separate subsystems and how they work together. Students will practice: preventive maintenance required to keep the machine running in top condition; diagnosis of problems using existing technical skills supplemented with the training manuals provided with this course. Students will become familiar with the machines' self-checking diagnostics, and how to proceed with troubleshooting and repair as recommended by the manuals or the equipment distributor's service staff.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

MFG-380 EDM Fundamentals

This course covers the basics of wire and ram type EDMing. Classroom instruction includes the theory and fundamentals of EDMing, wire and electrode materials, the role of deionized water and dielectric fluids, power supplies, computer numerical control (CNC) EDM. Lab work consists of fabrication of electrodes and setup and operation of EDM machine tools.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

MFG-408 Basic Diemaking

This is a course in basic tool and die theory, building procedures and techniques. Units of instruction include principles of piercing, blanking and bending as well as die terminology and construction applications.

Credit Hours: 8 Lecture Hours: 32 Lab Hours: 192

Prerequisite(s): A minimum grade of D in MFG-214, MFG-228, and MFG-364.

Pre/Co-requisite(s): A minimum grade of D in MFG-410.

Course Type: Technical

MFG-410 CAD Die Design

This course is the study of die assembly prints correlated with work sequencing and procedures used to efficiently produce and assemble dies. Activities include the use of CAD software to derive design information needed to build components in the die for a variety of die designs. The course will develop student skill in using assembly print information to plan the build process for various types of stamping dies.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

MFG-431 Die Revision and Repair

This course will train students on common maintenance, repair and revision techniques performed on manufacturing tooling such as stamping dies, injection molds, fixtures and jigs. The student will also learn about the maintenance schedule for manufacturing tools, the function and installation of safety sensors, secondary operation components, and gage and inspection components in production tooling.

Credit Hours: 5 Lecture Hours: 16 Lab Hours: 128

Prerequisite(s): A minimum grade of D in MFG-408.

Course Type: Technical

MFG-452 Moldmaking

The student is presented with the basic fundamentals of plastic mold construction and molding processes. Experienced individuals may contact instructor to gain admittance to this course.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of D- in MFG-408.

Course Type: Technical

MFG-525 CMM Inspection and SPC

This course instructs the student on the capabilities and basic operation of a Coordinate Measuring Machine used in manufacturing to inspect precision machined parts. Students will also be introduced to using inspection data in the Statistical Process Control method of insuring quality production. SPC fundamentals and software applications will be introduced in this course.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of D in MFG-142.

Course Type: Technical

MFG-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for 1 – 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

MGT: Management

MGT-101 Principles of Management

A study of current theory and practice of leading a complex business organization toward the accomplishment of organizational objectives.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

MGT-110 Small Business Management

A study of current theory and practices in creating and running a small business. The course includes the study of management functions as well as a discussion of business startup, including the creation of a business plan.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-121 Project Management Basics

This course will introduce concepts of project management and the role of the project manager. Emphasis will be placed on project management processes. Practical applications and case studies are used to reinforce and apply concepts to real life situations.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-142 Problems and Issues in Supervision and Management

This course provides students in the Human Resource Management program with the opportunity to reinforce their learning experiences from preceding HRM courses. Emphasis is placed on application of day-to-day HRM functions by completing exercises, cases, and simulations. Upon completion, students should be able to determine the appropriate actions called for by typical events that affect the status of people at work.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-170 Human Resource Management

A study of the theory, principles, concepts and practices of developing and utilizing personnel within business organizations.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-174 Training and Employee Development

This course covers developing, conducting, and evaluating employee training with attention to adult learning principles. Emphasis is placed on conducting a needs assessment, using various instructional approaches, designing the learning environment, and locating learning resources. Upon completion, students should be able to design, conduct, and evaluate a training program.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-177 Staffing

This course introduces the basic principles involved in managing the employment process. Topics include personnel planning, recruiting, interviewing and screening techniques, maintaining employee records, and voluntary and involuntary separations. Upon completion, students should be able to acquire and retain employees who match position requirements and fulfill organizational objectives.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-178 Employment Law

This course introduces the principle laws and regulations affecting public and private organizations and their employees or prospective employees. Topics include fair employment practices, Equal Employment Opportunity (EEO), affirmative action, and employee rights and protections. Upon completion, students should be able to evaluate organization policy for compliance and assure that decisions are not contrary to law.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-180 Management and Labor Relations

This course covers the history of the organized labor movement and the contractual relationship between corporate management and employees represented by a union. Topics include labor law and unfair labor practices, the role of the National Labor Relations Board (NLRB), organizational campaigns, certification/decertification elections, and grievance procedures. Upon completion, students should be able to act in a proactive and collaborative manner in an environment where union representation exists.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-181 Customer Service Strategies

This course is designed to introduce students to the concepts of customer service and to help them learn the skills and techniques necessary to provide excellent service to the internal and external customers of the organizations for which they work. These skills are vital for every job since identifying and satisfying customer needs are essential parts of every business organization.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

MGT-190 Employee Compensation and Benefits Management

This course will develop knowledge in the area of compensation and benefit practices including job evaluation, salary surveys, individual and group performance based pay plans, health insurance, wellness programs, pensions, and the associated legal environment. Compensation and benefit management theories will be integrated with organizational goals and objectives severing as the overall foundation for development and implementation.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-208 Introduction to Information Systems

The purpose of the course is to provide the student with a broad understanding of management information systems (MIS) and also to provide more detailed hands-on use of application programs for better preparation for employers. The course covers management information topics, spreadsheets, databases, HTML and visual basic for applications (VBA).

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

MGT-210 Management Decision Making

A capstone course which uses case studies to review all aspects of the Marketing Management program. Emphasis is placed on decision making and is to be taken in the student's final semester.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-222 Golf Club Operations

Students will study strategic, tactical and operational practices regarding golf courses. Key determinates as to why some golf courses are successful and others struggle.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MGT-590 HR Certification Prep

This course will explore the certification exams for certification in human resources. While the course does not guarantee students will pass the exams, the course will address major aspects of the exams, main areas of content, test taking tips and strategies, as well as registration for the exams.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MIL: Military and ROTC

MIL-103 Military Survival Skills

Basic military survival principles are discussed in class and demonstrated during a Survival Weekend. Concepts taught are: shelter building, water and food gathering, land navigation, first aid, and rescue signaling. Discussion, 1 hr./wk.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: General Education / Transfer

MIL-110 Leadership and Personal Development

Introduces students to the personal challenges and competencies that are critical for effective leadership in the military. Students learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. Discussion, 1 hr./wk.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

MIL-115 Foundations of Tactical Leadership

Examines the challenges of leading in complex contemporary military operational environments. Dimensions of the cross-cultural challenges of military leadership in a constantly changing world are highlighted and applied to practical leadership tasks and situations. Discussion 2 hrs./wk.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MIL-120 Innovative Team Leadership

Explores the dimensions of creative and innovative military leadership strategies and styles by studying historical case studies and engaging in interactive student exercises. Students practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises. Discussion, 2 hrs./wk.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: General Education / Transfer

MIL-121 Leadership and Decision Making

Explores the dimensions of creative and innovative military leadership strategies and styles by studying historical case studies and engaging in interactive student exercises. Students practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises. Discussion, 2 hrs./wk., lab arranged, plus 1 field trip.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: General Education / Transfer

MIL-122 Leadership in Changing Environment

Credit Hours: 2 Lecture Hours: 32

Course Type: General Education / Transfer

MIL-130 Military Fitness Class

This course is designed to use basic military training skills and instruction to develop confidence, leadership, and physical fitness. The team approach is utilized in the instruction and application of Army physical fitness requirements. Students will learn various Army physical fitness techniques as well as how to conduct physical fitness sessions. Full participation in all events will be determined based on students physical and medical eligibility.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MKT: Marketing

MKT-110 Principles of Marketing

An overview of the processes, problems and activities associated with the planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

MKT-140 Principles of Selling

Planned learning activities and experiences emphasize the psychology of selling, the selling process, sales techniques, and selling as a professional career.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MKT-142 Consumer Behavior

Consumer behavior is the course within a marketing curriculum that most directly applies concepts, principles, and theories from the various social sciences to the study of the factors that influence the acquisition, consumption, and disposition of products, services, and ideas.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MKT-152 Advertising and Visual Merchandising

This course presents the fundamentals of advertising and visual merchandising as promotional tools. It incorporates the Integrated Marketing Communication (IMC) concept.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MKT-160 Principles of Retailing

Organized learning activities emphasize the status of retail environments, operations, locations, merchandising, pricing and promotions.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MKT-198 Sports Marketing

This course will explain the basics of sports marketing, research, and delivery.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MKT-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for up to 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MLT: Medical Laboratory Technology

MLT-101 Introduction to Lab Science

This course familiarizes the student with the MLT program and the field of laboratory medicine. The organization and role of the clinical laboratory are explored, as well as medical ethics and conduct, employment opportunities, and professional organizations.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

MLT-103 Lab Mathematics

Mathematical calculations applicable to the clinical laboratory are studied in this course. Emphasis is on the Metric System and calculations involved in the preparation of laboratory solutions and dilutions.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

MLT-110 Fundamental Lab Techniques

This course is directed toward developing the knowledge and technical skill necessary to perform basic laboratory tests. Emphasis is placed on use and maintenance of laboratory equipment, quality control, and safety techniques.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

MLT-120 Urinalysis

This course includes the study of urine formation and methodology determining the physical, chemical, and microscopic properties of urine in normal and abnormal states.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

MLT-130 Hematology

Hematology is the study of the formed elements of the blood-red blood cells, white blood cells, and platelets. Development and characteristics of these, methods of measurement, and abnormalities are covered.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in MLT-110.

Course Type: Technical

MLT-230 Advanced Hematology

This advanced course is a sequel to Hematology I, and includes an in-depth study of various anemias, leukemias, and other hematologic disorders.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in MLT-130.

Course Type: Technical

MLT-233 Hemostasis and Thrombosis

This course emphasizes the mechanism by which the body prevents loss of blood from the vascular system. There is a focus on chemical responses of blood vessels, platelet activation and biochemical reactions that lead to clot formation and dissolution. Students learn to perform the tests used to detect coagulation deficiencies and abnormalities.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in MLT-110.

Course Type: Technical

MLT-240 Clinical Chemistry I

The student will learn the analytical techniques for precise measurement of chemical constituents of the blood and other body fluids. Clinical correlation of test results with states of health and disease will also be covered.

Credit Hours: 7 Lecture Hours: 64 Lab Hours: 96

Prerequisite(s): A minimum grade of C in CHM-122, MLT-110, and MLT-103.

Course Type: Technical

MLT-250 Clinical Microbiology

The emphasis in this course is on bacteria of medical importance, with respect to their cultivation, isolation, identification, and pathogenicity. The student learns techniques of specimen collection, media preparation, culture, staining, biochemical testing, and antibiotic susceptibility testing. Mycology and virology are introduced.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): A minimum grade of C in BIO-186

Co-requisite(s): A minimum grade of C in MLT-110

Course Type: Technical

MLT-252 Parasitology

This course includes a study of medically important human parasites with respect to life cycle, pathogenicity, and laboratory identification.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

MLT-260 Immunohematology

Blood grouping, typing, antibody screening and identification, and compatibility testing are covered, along with an overview of hemolytic disease of the newborn, processing of donor blood, and blood component therapy.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): A minimum grade of C in MLT-110.

Course Type: Technical

MLT-270 Immunology and Serology

In this course, the focus in on the reactions of the body's immune system to foreign substances. There is emphasis on reactions between antigens and antibodies and students will learn to detect diseases such as syphilis, infectious mononucleosis, rheumatic fever and others.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in MLT-110.

Course Type: Technical

MLT-283 Clinical Practicum: Urinalysis

This course is a continuation of Urinalysis I and is designed to provide the student with clinical experience in the performance of routine urinalysis. Comparison of methodology with that covered in Urinalysis I is stressed.

Credit Hours: 1 Co-op Hours: 64

Prerequisite(s): A minimum grade of C in MLT-120.

Course Type: Technical

MLT-284 Clinical Practicum: Immunohematology

This course is a continuation of Immunohematology I and is designed to provide the student with clinical experience in specimen collection and performance of immunohematologic tests. Comparison and contrast with methodology of Immunohematology I is stressed.

Credit Hours: 2 Co-op Hours: 128

Prerequisite(s): A minimum grade of C in MLT-260.

Course Type: Technical

MLT-285 Clinical Practicum: Chemistry

This course is a continuation of Clinical Chemistry I and is designed to provide the student with clinical experience in specimen collection and performance of clinical chemistry tests. Comparison and contrast with methodology of Clinical Chemistry I is stressed and there is emphasis on use of automatic equipment.

Credit Hours: 4 Lecture Hours: 16 Co-op Hours: 192

Prerequisite(s): A minimum grade of C in MLT-240.

Course Type: Technical

MLT-286 Clinical Practicum: Immunology and Serology

This course is a continuation of Immunology and Serology I and is designed to provide the student with clinical experience in the performance of serologic testing. There is emphasis on the comparison and contrast of methodology with Immunology and Serology I.

Credit Hours: 1 Co-op Hours: 64

Prerequisite(s): A minimum grade of C in MLT-270.

Course Type: Technical

MLT-287 Clinical Practicum: Hematology

This course is a continuation of Hematology I and Advanced Hematology. It is designed to provide the student with clinical experience in specimen collection and performance of routine hematology and coagulation tests. Comparison and contrast with methodologies of Hematology I and Advanced Hematology is stressed and experience with automation is provided.

Credit Hours: 4 Lecture Hours: 16 Co-op Hours: 192

Prerequisite(s): A minimum grade of C in MLT-130 and MLT-230.

Course Type: Technical

MLT-288 Clinical Practicum: Microbiology

This course is a continuation of Clinical Microbiology I and Parasitology. It is designed to provide the student with experience in bacteriologic, mycotic and parasitologic studies in a clinical setting. Practices and procedure of Clinical Microbiology I are compared and contrasted with clinical practice.

Credit Hours: 4 Lecture Hours: 16 Co-op Hours: 192

Prerequisite(s): A minimum grade of C in BIO-186, MLT-250, and MLT-252.

Course Type: Technical

MLT-291 Lab Survey and Review

This course is designed to give the student an opportunity, at the end of the clinical practicum, to review all departments of the laboratory. Class time is provided for review of didactic materials and preparation for the comprehensive examination. Clinic time is provided for review or additional experience in any or all departments of the laboratory.

Credit Hours: 1 Co-op Hours: 64

Prerequisite(s): A minimum grade of C in MLT-283, MLT-284, MLT-285, MLT-286, MLT-287, and MLT-288.

Course Type: Technical

MMS: Mass Media Studies

MMS-105 Audio Production

This course examines the principles of sound and acoustics and basic audio capture techniques. The equipment for recording as well as production and editing audio will be analyzed and employed. Sound quality and final output issues will be addressed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

MMS-111 Video Production I

This course will introduce creative storytelling using the basics of video production, camera handling, digital exposure, audio capture and workflow. Emphasis is on the aesthetics and application of production techniques to produce professional video output.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

MMS-117 Social Media for Business

This course examines using social media outlets for promoting and doing business. The course will investigate issues and strategies related to social media environments, customer relationships, marketing, managing your communication, sustainability and what social media may look like in the future.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MMS-124 Survey of Commercial Video

This course examines how to produce a variety of types of videos for commercial use including promotional videos, music videos, weddings, corporate videos and live events.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D in MMS-111.

Course Type: Technical

MMS-128 Digital Print Production

This course will introduce students to the skills and software used for digital production of printed materials including still photos, brochures, flyers, poster, business cards and other materials printed from original digital creations.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

MMS-134 Media Writing

This course will focus on writing for media outlets including newspaper, television, radio, internet and public relations. Emphasis will be on writing clearly for both general and targeted audiences in order to communicate the desired message efficiently.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MMS-208 Sound for Film and Video

This course will cover the fundamental elements of producing, designing and editing sound for film and video. Students learn the basics of audio recording, sound editing and multi-track sound design specifically for the moving image. Topics covered include microphone techniques, field and studio recording, ADR, Foley techniques and using digital audio multi-tracking software.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in MMS-105 and MMS-111.

Course Type: Technical

MMS-213 Video Production II

This course will explain advanced video production techniques.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in MMS-111.

Course Type: Technical

MMS-214 Audio Production II

This course is designed to assist the student in learning advanced principles and processes of audio production. The course builds on skills learned in Audio Production I will familiarize and inform the student on proper techniques in audio production for a variety of media outputs.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in MMS-105.

Course Type: Technical

MMS-218 Editing and Color Grading

This course explains the theory and execution of video editing and color grading. It addresses technical competencies, such as workflow, formats, and the use of industry standard software. Students will also explore artistic techniques in video post-production including visual storytelling, sound design, and color. Students will produce final projects to demonstrate their understanding of key concepts.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of D in MMS-111

Course Type: Technical

MMS-219 Digital Audio Workstation

The digital audio workstation, referred to by DAW, is the primary tool for recording, editing, and mixing audio in the modern audio industry. Avid’s Pro Tools DAW software is the industry standard in studios everywhere. As an industry professional it is important to know the fundamentals of Pro Tools and DAW software. This course is designed to thoroughly explore the operation and application of the digital audio workstation using Pro Tools.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of D in MMS-105

Course Type: Technical

MMS-265 Mass Communications Law

This course examines media law, including First Amendment, copyright and fair use. It focuses on social, political, and economic influences. It examines legal constraints for students planning to become professional communicators.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

MMS-302 Solo Video Journalism

This course examines and explains the techniques for working in the field of video journalism as a sole practitioner.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Pre/Co-requisite(s): A minimum grade of D in MMS-111.

Course Type: Technical

MMS-305 Lighting for Cinematography

This course is focused on advanced lighting for commercial and narrative productions. Students will gain hands-on experience using industry standard lighting equipment and apply that knowledge and skill to real life situations. Students will study the nature of light in depth, learn how to create and manipulate light, and expand their understanding of the technical aspects of lighting.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C- in MMS-111 and MMS-213

Course Type: Technical

MMS-320 Recording Studio I

Course will introduce students to the basic operations of a recording studio. The course will detail proper methods for wiring of a studio, discuss studio acoustics, analyze studio design and address proper monitoring. The course will also demonstrate proper microphone placements and advanced compression methods.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in MMS-105 and MMS-214 .

Course Type: Technical

MMS-321 Electronic Studio Production

This course emphasizes audio production techniques and sound creation by electronic means, as opposed to acoustic sound capture and manipulation. Emphasis on MIDI technology and music production, audio synthesis, and audio sampling in a recording studio environment.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in MMS-105 and MMS-214.

Course Type: Technical

MMS-330 Motion Graphics for Video

This course explains the theory and execution of motion graphics in a video production environment. Instruction in use of and methods for constructing a variety of motion graphics and animation techniques will be delivered. Media management and output formats will also be addressed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in MMS-111 and MMS-213

Course Type: Technical

MMS-340 Live Sound Production

This course introduces students to the components and operation of public address sound systems. The course will cover equipment, setup, operation, and personal communication in a live sound production environment. This course offers students hands on lab and real world experiences with industry audio equipment.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in MMS-105 and MMS-214.

Course Type: Technical

MMS-400 Video Production for Web Streaming

This course will provide students technical application and training in producing, shooting and broadcasting via web streaming. It will offer students an advanced understanding of traditional television studio environments, as well as field production. Students will experience hands-on training and team-oriented tasks in studio floor positions, studio lighting, 3-camera operating setup, microphone setups, floor management and set design. In addition, technical aspects of control room duties, live and archival streaming processes will be covered.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in MMS-111 and MMS-213 .

Course Type: Technical

MMS-420 Recording Studio II

Course will be an advanced study in producing within the studio environment. The course will provide hands-on use of the studio equipment including mics, mixing boards and digital audio software. Advanced recording techniques will be employed. Production of a variety of music styles and the proper steps involved in recording and mixing and outputting each will be addressed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in MMS-105, MMS-214, and MMS-320.

Course Type: Technical

MMS-425 Mixing and Mastering Audio

Theory and practice in the various styles of mixing and mastering audio. Students will be given instruction on the various techniques used in the craft of mixing such as: equalization, panning perspectives, dynamics processing (compressors, limiters, gates, expanders), spatial effects (reverb and delay), modulation effects (chorus, flange, filters), and basic automation of audio and its corresponding effects. The mastering portion of the class will focus on the use of equalization, dynamics control, song sequencing, and correct formats of final delivery. This course will provide multiple styles of mixing and mastering including hardware-based instruction, in-the-box digital audio workstation methods, and hybrid workflows that utilize both analog and digital tools.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of D in MMS-105 and MMS-214

Course Type: Technical

MMS-431 Group Film

This class will focus on group production of independent, short films from concept to delivery. Emphasis will be on learning the roles and responsibilities as well as the technical and creative aspects of film making by working on small production teams. The instructor will function as “Executive Producer,” technical advisor and critical mentor.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of D in MMS-111 and MMS-213

Course Type: Technical

MMS-901 Portfolio Production

The course is intended to advance student knowledge in portfolio and resume construction and job search strategies.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

MMS-905 Digital Mass Media Internship

Students will intern at media agencies and outlets in the region and state, focusing on internal operations and client relations. May take for 1 – 3 credits.

Credit Hours: 3 Co-op Hours: 192

Course Type: Technical

MMS-949 Special Topics

This course offers a specialized study or project under the supervision of a faculty member. It may not duplicate any course already in the catalog. Students earn credit based upon the agreed upon credit and contact hours. This course can be repeated with different content for credit. Course may be taken for 1 – 3 credits.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

MUA: Music — Applied

MUA-101 Applied Voice

This course offers one half-hour lesson of private instruction per week, with a minimum of 30 minutes of practice per day. The goal is the development of both fundamental and advanced vocal techniques. The presentation of the standard repertoire for the specific voice is required. This course can be repeated with different content for credit.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MUA-106 Class Voice

This course provides instruction in fundamental vocal techniques. Breath support, diction, posture, vowel formation, tone production and stage presence will be explored through standard vocal repertoire chosen for each student's voice type.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

MUA-119 Class Piano

This course is designed for the student with no background in piano. It is especially recommended for the music student without piano experience, as well as the student who wishes to learn something of the piano for enjoyment. The student will begin to learn to read musical notation, develop the rudiments of technique, and become familiar with the keyboard. A minimum of three (3) hours of practice per week is essential. This course can be repeated with different content for credit.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

MUA-120 Applied Piano

Individualized instruction in piano for the beginning, intermediate, or advanced student. Requires fourteen 25 minute lessons during the semester. Additional outside practice/preparation is required. This course can be repeated with different content for credit. No prior musical experience is necessary.

May be repeated once.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MUA-121 Applied Piano II

This course provides applied lessons and guided instruction in tone production, technique, and musicianship skills. Students advance their skills through weekly lessons and regular practice of fundamental techniques and appropriate repertoire. This course can be repeated with different content for credit.

Credit Hours: 2 Lecture Hours: 32

Course Type: General Education / Transfer

MUA-180 Applied Percussion

Individualized instruction in percussion/drum set for the beginning, intermediate or advanced student. Requires 30 minute weekly lessons during the semester. Additional outside practice/preparation is required. This course may be repeated with different content for credit. No prior musical experience is necessary.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

MUA-181 Applied Percussion II

Individualized instruction in percussion/drum set for the beginning, intermediate or advanced student. Requires 30 minute lessons during the semester. Additional outside practice/preparation is required. This course can be repeated with different content for credit.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C- in MUA-180.

Course Type: General Education / Transfer

MUA-401 Applied Voice II

Applied Voice II meets individual needs based upon the student's background and training while providing applied lessons and guided instruction in tone production, technique, musicianship, and performance practice. Students advance their skills through weekly lessons and regular practice of fundamental techniques and solo repertory. This course can be repeated with different content for credit.

Credit Hours: 2 Lecture Hours: 32

Course Type: General Education / Transfer

MUS: Music — General

MUS-100 Music Appreciation

An introduction to the musical arts through listening to and studying the music of various periods. Some sections of the course may be presented by live musicians. Allied arts, including dance, painting, and literature, may be used to demonstrate the relatedness of music to the larger scope of human experience.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

MUS-102 Music Fundamentals

Introduction to Music Theory. Basic skills and vocabulary. For non majors with limited background in music fundamentals, or as preparation for music major theory courses. Emphasis on notation, key/time signatures, rhythm, and aural training. (Variable)

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

MUS-154 Chorus

This course is designed for the student to participate in group performances. The performing group meets regularly and presents a wide variety of choral literature throughout the year. This course can be repeated with different content for credit.

May be repeated once.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

MUS-202 World Music

This course is an exploration and comparative examination of non-western music and cultural traditions. Formatted for the general student and music major, the course will include fundamentals of music, basic elements of global music, and study of societal and cultural influence of music traditions on a nation/country.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

NET: Networking — Computer

NET-109 A+ Certification Prep Course

This course will teach basic knowledge of desktop and laptop operating systems. This course will teach the important knowledge and skills necessary to competently install, build, configure, upgrade, troubleshoot and repair personal computers, including troubleshooting basic network and internet connectivity. Additionally, this course will also cover the latest memory, bus, peripherals, and wireless technologies.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

NET-115 College Experience

This course is designed to orient Information Technology students to the college campus, resources, services, and expectations. This course will introduce information technology careers, certifications and preview key IT concepts and systems.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

NET-152 Advanced Network Technology

This course is designed to provide advanced training in a variety of networking topics. Network configuration, fault tolerance, redundancy, monitoring, maintenance and security will be the core drivers of course content. Emerging trends and technologies will be discussed and explored to aid students in creating and implementing an evolving network topology. Many topics support network uptime through proactive maintenance, fault tolerance and redundancy planning. Students will develop and maintain network documentation and determine appropriate action for common problems. This course will build and expand upon Cisco and network security coursework.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

NET-166 Applied Computer Security

This course will discuss the basic concepts of practical computer and Internet security: passwords, firewalls, antivirus software, malware, social networking, surfing the Internet, phishing, and wireless networks. This class is intended for students with little or no background in information technology or security. Basic knowledge of word processing required.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

NET-168 Administering Windows Server

This course focuses on implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server environment. This course will include the administration tasks necessary to maintain a Windows Server infrastructure such as configuring and troubleshooting name resolution, user and group management with Active Directory Domain Services (AD DS) and Group Policy, implementing Remote Access solutions such as DirectAccess, VPNs and Web Application Proxy, implementing Network Policies and Network Access Protection, PowerShell scripting, Data Security, deployment and maintenance of server images, as well as update management and monitoring of Windows Server environments. It covers the current objectives for the Microsoft Certification Exam.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in NET-313.

Course Type: Technical

NET-178 Intro to Cyber Security

This course will provide an overview of the vulnerabilities that exist in most information systems. Students will learn how policies, user education, software and hardware tools can help protect systems during an attack. This course will help students refine their critical thinking skills as they evaluate various technology topics and concepts while searching for underlying connections between the technology and how to apply those concepts in a lab setting, which is a skill that should be beneficial in any/all types of technology careers. This course will also help students gain hands on technology literacy which will be of vital significance when making important work- related decisions.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

NET-202 Programming for Network Administrators

This course introduces basic programming techniques using the Python programming language to automate system administration tasks. Students will design, code, and test Python applications. Students will also be introduced to PowerShell and other scripting tools, and see how these tools compare to Python. The focus of scripting use in this course is to aid in automation of regular system administration tasks.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C- in NET-178

Course Type: Technical

NET-213 Cisco Networking

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. It uses the OSI and TCP layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. Labs use a “model Internet” to allow students to analyze real data without affecting production networks. Packet Tracer (PT) activities help students analyze protocol and network operation and build small networks in a simulated environment. At the end of the course, students build simple LAN topologies by applying basic principles of cabling, performing basic configurations of network devices such as routers and switches, and implementing IP addressing schemes.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in MAT-063 or equivalent test score: ACT 19 Math, COMPASS 42 Algebra.

Course Type: Technical

NET-225 Routing and Switching Essentials

This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single area and multi-area OSPF, virtual LANS, and inter-VLAN routing in both IPv4 and IPv6 networks.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C in NET-213.

Course Type: Technical

NET-228 Cisco Networking II

This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with static routing, virtual LANS, and inter-VLAN routing in both IPv4 and IPv6 networks. Students will be able to perform basic network configuration and troubleshooting, identify and mitigate LAN security threats, and configure and secure a basic WLAN.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): Minimum grade of C in NET-213

Course Type: Technical

NET-229 Cisco Networking III

This course describes the architecture, components, and operations of routers and switches in a larger and more complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OPSF, NAT, ACL’s and wide area networking.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): Minimum grade of C in NET-228

Course Type: Technical

NET-268 CCNA Routing and Switching: Scaling Networks

This is the third of four courses leading to the Cisco Certified Network Associate (CCNA) designation. This course describes the architecture, components, and operations of routers and switches in a larger and more complex network. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issued with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in NET-225.

Course Type: Technical

NET-269 CCNA Routing and Switching: Connecting Networks

This is the fourth of four courses leading to the Cisco Certified Network Associate (CCNA) designation. This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement IPSec and virtual private network (VPN) operations in a complex network

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in NET-268.

Course Type: Technical

NET-310 Virtual Machines

This course will cover the concepts of virtualization including hardware and software. Topics will include benefits vs. risks analysis, installation and configuration, operation and maintenance and disaster recovery.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in NET-313.

Course Type: Technical

NET-313 Windows Server

This course provides the core foundation for supporting network-based servers. Students will learn the skills necessary to install, configure, customize, optimize, network, integrate and troubleshoot a Windows Server operating system. Students will study the design, implementation, and support of a network server network including specialized servers that are common to most networks.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in NET-109.

Course Type: Technical

NET-346 Windows Exchange Server

This course provides students with the knowledge and skills that are needed to install, update, and support a reliable, secure messaging infrastructure. This infrastructure is used for creating, storing, and sharing information by using Microsoft Exchange Server in a medium-sized to large-sized (100 to 5,000 seats) messaging environment. This course offers a significant amount of hands-on practices, discussions, and assessments that assist students in becoming proficient in the skills that are needed to support Microsoft Exchange Server.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C- in NET-313.

Pre/Co-requisite(s): Minimum grade of C- in NET-310.

Course Type: Technical

NET-350 Cisco Security

The Cisco Networking Security course provides a next step for individuals who want to enhance their introductory networking skill set and help meet the growing demand for network security professionals. The curriculum introduces the core security concepts and skills needed for the installation, troubleshooting, and monitoring of network devices to maintain the integrity, confidentiality, and availability of data and devices.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): Minimum grade of C- in NET-228

Course Type: Technical

NET-412 Linux System Administration

This course will introduce students to the Linux Operating System and is designed for students with little or no previous experience with Linux. Students will gain experience and understanding of basic setup and installation, configuration, navigation, permissions, command shells, and GUI environments available on Linux systems.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

NET-474 Certification Preparation

Course is designed as a review and final preparation for students taking Information Technology certification tests.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): Instructor approval required. Must have satisfactory grades in supporting classes and demonstrate motivation to attain certification.

Course Type: Technical

NET-475 Certification Preparation

Course is designed as a review and final preparation for students taking Information Technology industry certification exams.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Instructor approval required. Must have satisfactory grades in supporting classes and demonstrate motivation to attain certification.

Course Type: Technical

NET-612 Fundamentals of Network Security

This course is designed to provide student with a fundamental understanding of network security principles and implementation. Students examine the technologies used and principles involved in creating a secure computer networking environment.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C- in NET-313.

Course Type: Technical

NET-619 Network Attacks: Detection, Analysis & Countermeasures

This course provides students the opportunity to attack computer networks to test their defenses and teaches them how to analyze attacks. Topics include attacks and attack analysis, intrusion detection and analysis, and advanced defense countermeasure configuration using firewalls, routers and intrusion detection systems.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of C- in NET-178

Course Type: Technical

NET-710 SQL Database

This course is designed to teach the student the basics of computer database administration. This course will cover what a database server is and how it is used in a modern computer network. The course will inform the student about the components of the database and the tools used to tune the database software for optimum performance.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): Minimum grade of C- in CIS-303 and NET-313.

Course Type: Technical

NET-916 Experiential Learning

This course will allow students to put the skills obtained in the program to practical use in a simulated real world environment. In addition, students will refine teamwork skills and learn to conduct their actions in an appropriate manner for the business world.

Credit Hours: 5 Lecture Hours: 16 Lab Hours: 128

Prerequisite(s): Minimum grade of C in NET-310 and NET-346.

Course Type: Technical

NET-932 Internship

This course provides students with the opportunity to gain practical work experience, while applying skills and techniques learned in their program of study, under the supervision of an employer, manager, or supervisor. This course may be taken for 2–3 credit hours.

Credit Hours: 2 Co-op Hours: 128

Prerequisite(s): A minimum grade of C- in NET-109. Must be in program major and have completed 30 credits in one of the following programs: Network Administration and Engineering or Information Systems Management.

Course Type: Technical

NET-932 Internship

This course provides students with the opportunity to gain practical work experience, while applying skills and techniques learned in their program of study, under the supervision of an employer, manager, or supervisor. This course may be taken for 2–3 credit hours.

Credit Hours: 3 Co-op Hours: 128

Prerequisite(s): A minimum grade of C- in NET-109. Must be in program major and have completed 30 credits in one of the following programs: Network Administration and Engineering or Information Systems Management.

Course Type: Technical

NET-949 Special Topics

This course, usually offered on a limited basis only, provides an in-depth study on a topic of general interest pertaining to this department. This course can be taken for 1 – 3 credit hours.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

OTA: Occupational Therapy Assisting

OTA-101 Introduction to OT

This course introduces the key concepts of occupational therapy as a health and wellness profession. The roles of occupational therapists are explored, including in traditional and emerging health care, community-based, and education settings. The course will introduce foundational and philosophical concepts, professional ethics, and the emergence of occupational therapists and occupational therapy assistants in the profession. Students will participate in activities to developing an understanding of the occupational therapy process and the skills needed by a healthcare professional.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

OTA-102 Human Movement and Occupation

This course studies the interrelationship between the central nervous system, peripheral nervous system, and musculoskeletal system and analysis of functional movement required for engagement in occupation. Formal and informal biomechanical assessment methodologies are presented. Students will utilize assessment data for the occupational therapy process in collaboration with the occupational therapist to plan client-centered treatment sessions.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): Minimum grade of B in BIO-168 and BIO-173. Minimum grade of C in PSY-111, SPC-101, ENG-105, MAT-110, HSC-108, HSC-113, OTA-101, and OTA-120.

Course Type: Technical

OTA-103 Task Analysis

The course will introduce the development and emergence of human occupational performance throughout the lifespan by exploring areas of occupation, occupational roles, habits and routines. Students will learn to analyze occupational tasks and functional activity demands, grade and adapt activities, and build the basic skills necessary for teaching therapeutic activities to meet the needs of occupational therapy consumers, either individually or in groups. Emphasis will be placed on the use of occupation-based media as a means of understanding a client’s cognitive and functional performance. The significance of context and environment will also be explored in relationship to program planning and implementation of therapeutic interventions. Additional topics include an introduction to note writing and goal development.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): Minimum grade of B in BIO-168 and BIO-173. Minimum grade of C in PSY-111, SPC-101, ENG-105, MAT-110, HSC-108, HSC-113, OTA-101, and OTA 120.

Course Type: Technical

OTA-105 OTA and Professional Issues I

This is the first of three courses that focuses on the various aspects of professional issues which will allow the student increase their skills as they transition to a clinician. The course will focus on various types of documentation, advocacy, types of research, and locating, selecting, and comprehending scholarly reports.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Minimum grade of C in SPC-101, MAT-110, HSC-113

Course Type: Technical

OTA-120 Neuroanatomy for the OTA

This course provides a comprehensive study and in-depth knowledge of the structure and function of the central, peripheral, somatosensory, motor, and autonomic nervous systems. Special emphasis is placed on examining the functions of the nervous system and the neurological basis of dysfunction related to occupational performance.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Minimum grade of B in BIO-168 and BIO-173. Minimum grade of C in PSY-111, SPC-101, and ENG-105.

Course Type: Technical

OTA-201 Pediatrics and Occupation

The first in a sequence of courses addressing conditions causing disruption of occupational behaviors, skills, and life roles in humans throughout the lifespan. This course presents occupational and developmental frameworks for understanding the occupational nature of infants and children through the adolescent period, their families and caregivers. Means of applying the occupational therapy process by the occupational therapy assistant is studied within the contexts of a variety of disorders, conditions, and circumstances affecting this period of human development.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in OTA-102, OTA-103, and OTA-105.

Course Type: Technical

OTA-202 Pediatric OTA Skills

Structured experiential learning will provide opportunities for the student to solidify knowledge, develop and practice professional skills and behaviors utilized in the occupational therapy process with infants and children through the adolescent period and their families in a variety of settings.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of C in OTA-102, OTA-103, and OTA-105.

Course Type: Technical

OTA-204 Pediatric Psychosocial Conditions and Occupations

The first in a sequence of courses addressing psychosocial conditions causing disruption of occupational behaviors, skills, and life roles in humans throughout the lifespan. This course presents occupational and developmental frameworks for understanding the occupational nature of infants and children through the adolescent period, their families and caregivers. Means of applying the occupational therapy process by the occupational therapy assistant is studied within the contexts of a variety of mental health disorders, conditions, and circumstances affecting this period of human development.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C in OTA-102, OTA-103, and OTA-105.

Course Type: Technical

OTA-221 Level I Fieldwork Pediatrics

Students will be participant-observers in settings providing occupational therapy services to children and/or adolescents. Emphasis will be placed on development of professional work habits and supervisory collaboration.

Credit Hours: 1 Co-op Hours: 64

Prerequisite(s): Minimum grade of C in OTA-102, OTA-103, OTA-105

Course Type: Technical

OTA-222 OTA and Professional Issues II

This is the second of three courses that focuses on the various aspects of professional issues which will allow the student increase their skills as they transition to a clinician. This course will concentrate on principles of teaching and learning process in various settings, health literacy, advocacy, billing, measuring outcomes and documentation, supervision, communication, health and wellness for the client and occupational therapy practitioner, managing one's career, and intraprofessional role of occupational therapist and occupational therapy assistant.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): Minimum grade of C in OTA-102, OTA-103, and OTA-105

Course Type: Technical

OTA-311 Adult Psychosocial Conditions and Occupations

The second in a sequence of courses addressing psychosocial conditions causing disruption of occupational behaviors, skills, and life roles in humans throughout the lifespan. This course presents theoretical frameworks and models for understanding the occupational nature of early to middle adulthood at home, at work, and in the community. Approaches to applying the occupational process by the occupational therapy assistant is studied within the contexts of a variety of psychosocial disorders and conditions, and circumstances affecting this period of human development.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): A minimum grade of C in OTA-201, OTA-202, OTA-204, OTA-221, and OTA-222.

Course Type: Technical

OTA-312 Adult Psychosocial OTA Skills

Structured experiential learning will provide opportunities for the student to solidify knowledge, develop and practice professional skills and behaviors utilized in the occupational therapy process for individuals experiencing disruption in social, emotional and interactional abilities needed for adaptive occupational performance. Both individual and group intervention strategies are explored.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in OTA-201, OTA-202, OTA-204, OTA-221, and OTA-222.

Course Type: Technical

OTA-313 Level I Fieldwork Psychosocial

Students will be participant-observers in settings providing occupational therapy services to adult consumers with psychosocial conditions. Emphasis will be placed on application of didactic information, development of professional work habits, and supervisory collaboration.

Credit Hours: 1 Co-op Hours: 64

Pre/Co-requisite(s): A minimum grade of C in OTA-201, OTA-202, OTA-204, OTA-221, and OTA-222.

Course Type: Technical

OTA-314 Management and the OTA

This course will investigate the business and management issues as well as the role and responsibility of the occupational therapy assistant. Topics include literacy education, teaching and learning process for educational settings, evidence-based practice, leadership and management in occupational therapy, organizational planning, culture in the work place, changes that occur, management and supervision, financing and budgeting, professional standards, ethical and legal considerations, interprofessional and intraprofessional relationships.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): Minimum grade of C in OTA-201, OTA-202, OTA-204, OTA-221, and OTA-222

Course Type: Technical

OTA-315 Adult Physical Conditions and Occupations

The second in a sequence of courses addressing physical conditions causing disruption of occupational skills and life roles in humans throughout the lifespan. This course presents theoretical frameworks and models of practice for understanding the occupational nature of early to middle adulthood at home, work and in the community. Approaches for applying the occupational process by the occupational therapy assistant is studied within the contexts of a variety of physical disorders including conditions, and circumstances affecting this period of human development.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Minimum grade of C in OTA-311, OTA-312, OTA-313, and OTA-314

Course Type: Technical

OTA-316 Physical OTA Skills

Structured experiential learning will provide opportunities for the student to solidify knowledge, develop and practice professional behaviors utilized in the occupational therapy process for individuals experiencing disruption in motor and sensory-perceptual abilities needed for adaptive occupational performance.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): Minimum grade of C in OTA-311, OTA-312, OTA-313, and OTA-314

Course Type: Technical

OTA-401 Elders and Occupation

The third in a sequence of courses addressing conditions causing disruption of occupational behaviors, skills and life roles in humans throughout the lifespan. This course presents theoretical frameworks and models for understanding the occupational nature of late adulthood at home, at work, and in the community. Approaches to applying the occupational therapy process by the occupational therapy assistant is studied within the context of a variety of disorders, conditions, and circumstances affecting this period of human development.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): A minimum grade of C in OTA-311, OTA-312, OTA-313, and OTA-314.

Course Type: Technical

OTA-402 OTA Skills for Elders

Structured experiential learning will provide opportunities for the student to solidify knowledge, develop and practice professional skills and behaviors utilized in the occupational therapy process with elder consumers in a variety of settings.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in OTA-311, OTA-312, OTA-313, and OTA-314.

Course Type: Technical

OTA-403 Level I Fieldwork Physical Dysfunction

Students will be participant-observers in settings providing occupational therapy services to adult consumers with physical dysfunction. Emphasis will be placed on development of profesional work habits and supervisory collaboration.

Credit Hours: 1 Co-op Hours: 64

Prerequisite(s): A minimum grade of C in OTA-311, OTA-312, OTA-313, and OTA-314.

Course Type: Technical

OTA-502 Level II Fieldwork A

The first of two courses consisting of 8 weeks of full-time community-based clinical education. Students will participate in the delivery of occupational therapy services, in collaboration and with supervision from a currently licensed or credentialed occupational therapist or occupational therapy assistant. They will work with individuals at different point of the lifespan, experiencing disruption of occupational performance.

Credit Hours: 5 Co-op Hours: 320

Prerequisite(s): A minimum grade of C in OTA-315, OTA-316, OTA-401, OTA-402, and OTA-403.

Course Type: Technical

OTA-503 Level II Fieldwork B

The second of two courses consisting of 8 weeks of full time community-based clinical education. Students will participate in the delivery of occupational therapy services, in collaboration and with supervision from a currently licensed or credentialed occupational therapist or occupational therapy assistant. They will work with individuals at different points of the lifespan, experiencing disruption of occupational performance.

Credit Hours: 5 Co-op Hours: 320

Prerequisite(s): A minimum grade of C in OTA-502 including a passing score of the AOTA Fieldwork Performance Evaluation (FWPE) for the Occupational Therapy Assistant Student

Course Type: Technical

OTA-504 Student to Clinician

This course is the final course of three for aspects of professionalism which focuses on the various topics as a student increases their skills with transitioning to a clinician. The course will concentrate communicating the distinct nature of occupational therapy to variety of individuals, increasing knowledge of the occupational therapy practice’s aspect of business management, process of the requirements credentialing for and licensure, competency-based supervisory process, scholarly activity and communication of information, strategies for ongoing professional development in practice and academic settings, and professional responsibility in regards to liability.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): Minimum grade of C in OTA-502. Passing score of the AOTA Fieldwork Performance Evaluation (FWPE) for the Occupational Therapy Assistant Student

Course Type: Technical

PEA: Physical Education — Activities

PEA-117 Bowling I

This skill course introduces students to the lifetime activity of bowling. The course will cover basic fundamentals of bowling such as rules and etiquette, approach, ball delivery, strikes, spares, and scoring. Individual, league, and tournament play will also be included.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

PEA-123 Circuit Training

This aerobic course incorporates cross-training techniques allowing for an increased caloric expenditure with simultaneous improvement in muscular strength and endurance and flexibility. Alternating between resistance training, cardiovascular, and flexibility exercises provides the benefits of all three types of activities in one exercise session.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

PEA-145 Crosstraining and Core Fitness

This aerobic course, designed to improve physical fitness levels, provides the opportunity for participants of all levels to progress at their own pace. Various types of cardiovascular exercise modalities will be utilized throughout the course. Core stability and strengthening are also emphasized.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

PEA-150 Powerwalking

Power Walking is one of the most convenient forms of exercise. It takes minimal equipment and can be done anywhere. This course is designed to provide students with the opportunity to learn a lifelong physical activity. Power Walking is also an excellent way to start a fitness program.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

PEA-187 Weight Training I

This skill course introduces the student to basic principles of weight training and the effects of this type of exercise on the body. Personalized programs will be the focus while emphasizing proper lifting techniques and safety issues.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): A minimum grad of D in PEA-187.

Course Type: General Education / Transfer

PEA-191 Pilates

This skill course is designed to provide students with the opportunity to learn Pilates principles and mat-based exercises from the beginner level, through the intermediate level, and finishing with the advanced level. Pilates is a form of exercise that focuses on core stability and strength while simultaneously lengthening and strengthening the muscles without adding "bulk".

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

PEA-194 Vinyasa Yoga

This skill course introduces the fundamentals of Vinyasa Yoga. Vinyasa Yoga focuses on balanced asana (posture) sequences, as well as the connection of the asanas and the breath. There are a host of associated benefits including, but not limited to, increased levels of body awareness, increased strength and flexibility, as well as the benefits shown to be associated with relaxation.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

PEA-287 Weight Training II

This skill course emphasizes the importance of variation in the weight training regimen by incorporating different training systems.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): Minimum grade of D in PEA-187 Weight Training I

Course Type: General Education / Transfer

PEA-294 Weight Training III

Weight Training III provides consistent routine instruction in the performance of weight training exercises with emphasis on complex biomechanics of lifting.

Credit Hours: 1 Lab Hours: 32

Course Type: General Education / Transfer

PEC: Physical Education — Coaching / Officiating

PEC-110 Coaching Ethics, Techniques, and Theory

This is one of the four courses required to receive a coaching authorization or endorsement. This course meets the required hours for ethics. By the end of this course, participants should be able to explain methodology and responsibilities of a successful coach, apply teaching techniques to sports skills, connect how communication and motivation affect performance, and distinguish appropriate ethical behavior of coaches and students. Taking responsibility for their own learning, participants should be able to plan for an effective and meaningful experience for the athlete that is supported by informed decision-making.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PEC-115 Athletic Development and Human Growth

This is one of the four courses required to receive a coaching authorization or endorsement. This course will connect the participants to the basic concepts of growth and development of students in the 5th through 12th grade who would participate in school sponsored athletics. By the end of this course, participants should be able to explain how and when physical, social, emotional, and intellectual development occurs and how this development affects learning, behavior and performance. Taking responsibility for their own learning, participants should be able to plan for an effective and meaningful athletic experience for the adolescent that is supported by informed decision-making.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PEC-123 Anatomy for Coaching

This is one of the four courses required to receive a coaching authorization or endorsement. By the end of this course, participants should be able to apply basic physiological concepts to athletics, connect how they affect movement, conditioning, and performance. Taking responsibility for their own learning, participants should be able to plan for an effective and meaningful experience for the athlete that is supported by informed decision-making.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PEC-127 Care and Prevention of Athletic Injuries

This is one of the four courses required to receive a coaching authorization or endorsement. This course will describe the duties and responsibilities in protecting the health of athletes. The course is aimed at recognizing injuries and providing basic care for those injuries as well as techniques to prevent injuries from occurring.

Credit Hours: 2 Lecture Hours: 32

Course Type: General Education / Transfer

PEH: Physical Education and Health — General

PEH-111 Personal Wellness

This is an introductory level course designed to explore wellness in all dimensions. Students will assess their overall level of wellness, assess current lifestyle choices, and be enabled with strategies that will lead to an improved lifestyle and overall level of wellness.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PEH-141 First Aid

This course will use discussion and application to provide the layperson with the basic skills and knowledge necessary to provide First Aid, CPR, and AED to adult, child, and infant populations. Certification by the American Red Cross will be awarded to those who qualify.

Credit Hours: 2 Lecture Hours: 32

Course Type: General Education / Transfer

PEH-160 Fundamentals of Health Coaching

This course reviews health coaching and its relevance in today's health care industry. Includes information on coaching psychology, insight on weight management psychology, the physiology of obesity, techniques for lifestyle coaching, and the relationship between exercise and nutrition for weight control.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PEH-162 Introduction to Physical Education

Career exploration course into the fields of physical education, sport, health, and recreation. Philosophies, principles and historical perspectives will be introduced.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PEH-191 Sports Nutrition

This course will present basic principles of human nutrition and the nutritional needs of athletes and/or physically active populations. Examination of nutrition's effects on health and human performance, focusing on fuel sources, metabolism, hydration, supplement use and ergogenic aids, maintaining a healthy body composition, and eating disorders will also occur.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PEH-193 Sports Nutrition

Basic nutrition concepts and nutritional needs of athletes and physically active individuals will be the focus. Nutrient timing, metabolism and digestion, adequate hydration, body composition, and supplements and ergogenic aids will be discussed.

Credit Hours: 2 Lecture Hours: 32

Course Type: General Education / Transfer

PEH-909 Cooperative Education

Cooperative Education provides an observation and participation experience to explore duties, roles, and responsibilities in settings related to wellness, athletics, exercise science, physical education, and/or a similar agency. This takes place in area agencies under the direction of a supervisor. This course can be repeated with a different agency for credit.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in PEH-162.

Course Type: General Education / Transfer

PEH-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course may be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PEH-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PEH-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PHI: Philosophy

PHI-101 Introduction to Philosophy

An investigation of some of the fundamental problems of human existence--human nature, the nature of reality, how and what we know, the existence of God, ethical behavior, justice and freedom. This will be undertaken through readings and discussions of major philosophical schools of thought in Western and non-Western traditions.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PHI-105 Introduction to Ethics

Introduction to Ethics examines contemporary ethical conflicts and provides a grounding in the language, concepts, and traditions of ethics. This course provides students with the intellectual tools to analyze moral dilemmas in the fields they choose to pursue and participate in as members of society.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PHI-121 Classical/Medieval Philosophy

This course will cover an intellectual history of Western civilization from the pre-Socratic philosophers through Scholasticism. The course will begin by looking at several philosophers preceding Socrates, as well as study Socrates, Plato, Aristotle, and the impact of Greek philosophy. It will then look at the development of early Christianity through Augustine, the early Medieval period through Thomas Aquinas, and the late medieval period through William of Occam.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PHS: Physical Science

PHS-120 Exploring Physical Science

This course introduces the student to the concepts and processes of physics, chemistry, astronomy, and earth science. Students are presented with a general overview of theories that have an impact on their everyday lives.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in MAT-063.

Course Type: General Education / Transfer

PHS-142 Principles of Astronomy

This physical science course explores the mysteries of the universe. Through scientific reason, the course will examine the following: the history of astronomy, the planets, stars, nebulae, galaxies, the creation and fate of the universe and our place in it. This course includes amateur observation techniques.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D- in MAT-063 or appropriate placement score.

Course Type: General Education / Transfer

PHS-152 Astronomy

A basic course in descriptive astronomy dealing with the development of modern astronomy and with its present-day theories and observations. Topics covered include motions of solar system and deep sky objects, telescopes and other instruments, members of the solar system, nature of the sun, other stars, origin and development of stars and planets, our galaxy, other galaxies, and the organization of the universe.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of D- in MAT-063 or appropriate placement score.

Course Type: General Education / Transfer

PHS-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course may be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PHS-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PHS-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PHT: Photography — Commercial

PHT-102 Photo Design I

This course identifies the fundamental design and compositional elements contained in quality images used for professional photography. The course provides exposure to several photographic styles which can be drawn upon for each individual's photographic journeys.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

PHT-106 Introduction to Image Editing

This course will provide a basic introduction to raster based still digital image manipulation using industry standard software. This course is designed to provide students with a workable understanding of the digital software interface and tools used in imaging workflows.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

PHT-108 Camera I

This course is an introduction to the basics of camera handling, exposure and meter usage.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

PHT-109 Print I

This course is an introduction to the basics of processing camera outputs and applying techniques used to produce a professional print. This course also emphasizes the fundamental print finishing methods used in the professional photography industry to enhance a photograph's overall presentation.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Pre/Co-requisite(s): PHT-108.

Course Type: Technical

PHT-110 Camera II

This course is an extension of Camera I and expands on camera captures, introducing editing workflows and image conversions. Additional camera accessories and optical image management are explained along with common problems with optics and what can be done to correct for them.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Minimum grade of D- in PHT-108.

Course Type: Technical

PHT-111 Print II

This course emphasizes color output and the need for a properly managed original image, and properly managed output devices that result in either physical prints or virtual presentations.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): PHT-109 and PHT-106.

Pre/Co-requisite(s): PHT-202 or PHT-204.

Course Type: Technical

PHT-202 Basic Portraiture

This course presents an introduction and an overview of the professional portrait field. The course will introduce management techniques used in portrait studios. The course will include instruction on studio equipment and utilizing natural light and studio lighting to produce acceptable portraits.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in PHT-106, PHT-108, and PHT-109.

Course Type: Technical

PHT-204 Basic Commercial Photography

This course presents an overview of a profession in commercial still photography. Techniques, assignment types, expectations, working conditions, types of photography products used, studio procedures and equipment requirements will be discussed and demonstrated.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D in PHT-106, PHT-108, and PHT-109.

Course Type: Technical

PHT-210 Visual Communication

This course is a survey of the tools, materials and processes used for the production of visual messages in society. Course work includes practical application in the selection, utilization and implementation of materials in the preparation and design of messages.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

PHT-212 Intermediate Electronic Imaging

This course will develop skills needed for adjusting and enhancing photographic images after image capture and before going to a final output. The emphasis will be on images used in the photography professions of Portrait, Commercial and Photojournalism. All image manipulations will be accomplished with computer imaging software.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): PHT-106.

Course Type: Technical

PHT-215 Portrait Image Editing

This course will deal with adjusting and enhancing images after capture and before final output using computer imaging software. Emphasis will be on images used in the portrait photography industry.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): PHT-106.

Course Type: Technical

PHT-216 Commercial Image Editing

This course will deal with adjusting and enhancing images after capture and before final output using computer imaging software. Emphasis will be on images used in the commercial photography industry.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): PHT-106 and PHT-111.

Course Type: Technical

PHT-217 Advanced Portrait Image Editing

This course will deal with multiple images in portrait production giving a series of images that will be used together in an album or multi-image presentation a consistent look, or insuring a series of images that will be combined into a composite image will have appropriate balance.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): PHT-215.

Course Type: Technical

PHT-218 Advanced Commercial Image Editing

This course will deal with multiple images in commercial production; giving a series of images that will be used together in a catalog or brochure a consistent look, or insuring a series of images that will be combined into a composite image will have appropriate balance.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): PHT-216.

Course Type: Technical

PHT-220 Intermediate Portraiture

This course is designed to assist the student in learning advanced portrait techniques and the business tools needed to start and maintain a portrait studio. The course creates an awareness of the work environment the student will enter. This course builds on the skills learned in Basic Portraiture and will include portrait assignments incorporating the criteria for acceptable portraits while utilizing studio lighting and natural lighting.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in PHT-202.

Course Type: Technical

PHT-227 Intermediate Commercial

This course builds on the theory and techniques learned in Basic Commercial Photography. Lighting and image control will be presented in a variety of situations both in the studio and on location.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D in PHT-204.

Course Type: Technical

PHT-240 Portrait Production and Portfolio

This course is designed to assist the student in learning production portrait techniques and the customer services needed to start and maintain a portrait studio. The course creates an awareness of the work environment. This course builds on the skills learned in Intermediate Portraiture and will include various portrait assignments in the studio, outdoors and on location. A portfolio presentation is required upon completion.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in PHT-220.

Course Type: Technical

PHT-241 Portrait Business

This course overviews the day to day operations specific to a portrait photography business, including business structure, cost of doing business, invoicing, staffing and business taxes.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in PHT-202

Course Type: Technical

PHT-242 Audio Visual Presentations

This course introduces the student to the aspects of planning, producing, distributing and presenting computer based multimedia. Macintosh and PC computer platforms will be utilized to complete assignments. Students will integrate digital photography and digital audio to produce assignments.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in PHT-110 or MMS-103.

Course Type: Technical

PHT-244 Wedding Photography

This course presents an overview of the professional wedding field. The course will include instruction on equipment, lighting and posing utilized for photographing a wedding. The course will also cover marketing, sales techniques and the day-to-day business procedures needed to operate a wedding business.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): PHT-220.

Course Type: Technical

PHT-245 History of Photography

This course introduces the student to the history of the photographic profession and it's ascent to the modern art form we know today. The people, processes, and their contribution to society throughout photography's short history will be discussed and studied. In addition, the medium's future will be examined.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

PHT-247 Commercial Production and Portfolio

This course will look at a number of challenging situations likely to be encountered by commercial photographers, including ones that require advanced lighting solutions, large teams of people, or extensive planning and preparation. This course analyzes a variety of photographic styles and considers the importance of developing a personal photographic style. Students will be required to produce and present a portfolio of their commercial images.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D in PHT-227.

Course Type: Technical

PHT-248 Commercial Business

This course overviews the day to day operations specific to a commercial photography business, including business structure, cost of doing business, invoicing, staffing and business taxes.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of D in PHT-204.

Course Type: Technical

PHT-249 Advanced Commercial Lighting

The course will cover advanced lighting theory and techniques, working with a number of both common and challenging lighting situations likely to be encountered by commercial photographers, on location and in studio.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in PHT-204.

Course Type: Technical

PHT-251 Fine Art Photography

This course will present an overview of the Fine Art Photography field. Outlets will be identified for selling personal fine art photography. The course will also include instruction on how to apply to shows and give direction on how to present, display, and sell fine art photography.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of D in PHT-111.

Course Type: Technical

PHT-253 Art Direction

This course will provide an overview of the working relationship between the photographer and the art director, as well as explore skills needed for good communication and collaboration.

Credit Hours: 3 Lecture Hours: 48

Pre/Co-requisite(s): A minimum grade of D in PHT-204.

Course Type: Technical

PHT-928 Photography Independent Study

This course provides opportunity for a student to focus previous course work and knowledge on a special issue as well as provide for individualized exploration of topics pertinent to the student's projected objectives within any recognized discipline. Faculty consultation is required prior to registration for this course. This course can be repeated with different content for credit. This course can be taken for 1–5 credit hours.

May be taken for up to 5 credits.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

PHY: Physics

PHY-100 Physics in Everyday Life

Basic laws and concepts of physics introduced and applied to activities to help students investigate how physics applies to everyday life.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PHY-162 College Physics I

This course covers the fundamental concepts, principles and laws of physics and their applications. It covers kinematics, dynamics, force, linear and rotational motion, fluids, sound, temperature, and heat.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in MAT-741 or MAT-121. Or equivalent placement score.

Course Type: General Education / Transfer

PHY-172 College Physics II

This course is the second semester continuation of General Physics I. The course studies the fundamental concepts, principles and laws of physics and their application. It covers electricity and magnetism, light and geometric optics, quantum and nuclear physics.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in PHY-162.

Course Type: General Education / Transfer

PHY-183 Applied Physics

This course is an introduction to topics of classical physics such as motion, friction, gravitation, vibrational motion, thermodynamics, sound, light and optics.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in MAT-504, MAT-741, or MAT-121.

Course Type: Technical

PHY-212 Classical Physics I

This course introduces physics using calculus-level mathematics. Designed for students in Engineering, Mathematics, and Physics. The first semester of this sequence covers the topics of vectors, linear and rotational kinematics, statics, dynamics, oscillatory and wave motion, temperature, and heat.

Credit Hours: 5 Lecture Hours: 64 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in MAT-210.

Course Type: General Education / Transfer

PHY-222 Classical Physics II

This course is the second semester continuation of Classical Physics I. This is a calculus-based course that studies the fundamental concepts, principles and laws of physics, and their applications. Topics include: electricity and magnetism, light and geometric optics, quantum and nuclear physics.

Credit Hours: 5 Lecture Hours: 64 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in PHY-212 and MAT-216.

Course Type: General Education / Transfer

PHY-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course may be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PHY-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PHY-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PNN: Practical Nursing

PNN-115 Introduction to Nursing

Introduction to nursing is the initial course for the student entering the profession of nursing and begins with an introduction to the history of nursing and nursing as a profession. Components of the nursing process are described and utilized with implementation of nursing technologies. The student will learn aspects of infection control, hygiene, safety, body alterations, therapeutic communication and healthcare prevention.

Credit Hours: 4 Lecture Hours: 64

Prerequisite(s): A minimum grade of B in HSC-108, BIO-168, BIO-173, and ENG-105.

Course Type: Technical

PNN-116 Introduction to Nursing Skills Lab

This course provides students the opportunity to demonstrate the practical application of basic nursing skills. There is emphasis on the critical elements of nursing procedures and the scientific rationale for performing the procedures correctly.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of B in HSC-108, BIO-168, BIO-173, and ENG-105.

Pre/Co-requisite(s): A minimum grade of B in PNN-115 and PNN-1222. Minimum grade of Pass in PNN-117.

Course Type: Technical

PNN-117 Nursing Clinical I

This course provides students with an introduction to clinical nursing. Emphasis is placed on utilizing the nursing process as a basis for clinical decision-making. Nursing professionalism and basic nursing skills are introduced.

Credit Hours: 1 Clinic Hours: 48

Prerequisite(s): A minimum grade of B in HSC-108, BIO-168, BIO-173, and ENG-105.

Pre/Co-requisite(s): A minimum grade of B in PNN-115, PNN-116, and PNN-122.

Course Type: Technical

PNN-118 Nursing Clinical II

This course provides students with a continuation of clinical nursing. Emphasis is placed on utilizing the nursing process as a basis for clinical decision making and development of critical thinking. Nursing professionalism standards are reinforced and basic essential nursing skills such as SBAR hand off report, data analysis and trends are introduced.

Credit Hours: 1 Clinic Hours: 48

Prerequisite(s): Minimum grade of B in PNN-115, PNN-122, and PNN-116. Minimum grade of Pass in PNN-117.

Course Type: Technical

PNN-122 Introduction to Pharmacology

This course introduces students to the basic principles of pharmacology and medication administration. The course will focus on the safe use, pharmacological principles, indications, and nursing implications related to drug therapy when caring for individuals and families across the life span. General characteristics of selected medications including pharmacokinetics, pharmacogenomics, side effects, adverse effects, contraindications, administration, and client education will be discussed.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Minimum grade of B in HSC-108, ENG-105, BIO-168, and BIO-173

Pre/Co-requisite(s): Minimum grade of B in PNN-115 and PNN-116. Minimum grade (P/F) in PNN-117

Course Type: Technical

PNN-214 Basic Health Alterations A

This course builds on concepts learned in previous coursework from bio/psycho/social sciences, humanities, and nursing as well as from current evidence-based literature. Emphasis is placed on applying the nursing process to clients and families across the life span in a variety of settings. The content is organized according to body systems, focusing on nursing implications for clients with predictable health problems as well as related health promotion and disease prevention strategies. Systems included in this course are cardiovascular, hematology/oncology, fluids/ electrolytes, integumentary, gastrointestinal, and urinary/male reproductive.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C in MAT-102, or MAT-128, or MAT-134, or MAT-156, or MAT-210, or MAT-216, or MAT-219. A minimum grade of B in PNN-115, PNN-116, and PNN-122. Grade of Pass in PNN-117.

Pre/Co-requisite(s): A minimum grade of C in BIO-151. Grade of Pass in PNN-218.

Course Type: Technical

PNN-215 Basic Health Alterations B

This course builds on concepts learned in previous coursework from bio/psycho/social sciences, humanities, and nursing as well as from current evidence-based literature. Emphasis is placed on applying the nursing process to clients and families across the life span in a variety of settings. The content is organized according to body systems, focusing on nursing implications for clients with predictable health problems as well as related health promotion and disease prevention strategies. Systems included in this course are respiratory, endocrine, musculoskeletal, neurological, sensory, pain, and immune disorders.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of B in PNN-115, PNN-116, and PNN-122. Minimum grade of Pass in PNN-117 and PNN-118.

Pre/Co-requisite(s): A minimum grade of B in PNN-319. Minimum grade of Pass in PNN-221.

Course Type: Technical

PNN-216 Health Promotion & Maintenance Across the Lifespan

This course builds on concepts learned in previous coursework from bio/psycho/social sciences, humanities, and nursing as well as from current evidence-based literature. Exemplars from maternal-child nursing and mental health nursing will be used in demonstrating the integration of principles of the nursing process and healthcare agencies. Cultural, ethical, and legal challenges will be discussed.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): A minimum grade of C in MAT-121, or MAT-110, or MAT-102, or MAT-128, or MAT-134, or MAT-156, or MAT-210, or MAT-216, or MAT 219.

Pre/Co-requisite(s): A minimum grade of B in PNN-115, PNN-116, and PNN-122. Minimum grade of Pass in PNN-117 and PNN-118.

Course Type: Technical

PNN-218 Nursing Clinical III

This clinical course provides opportunities for students to incorporate concepts from course work in bio/psycho/social sciences, humanities, nursing and current evidence-based literature to provide safe, competent care of adult clients experiencing common basic alterations in body systems. The course utilizes the nursing process in order to achieve best practice outcomes in a medical/surgical setting. Particular emphasis is placed on concepts of holistic care, client education and critical thinking for cardiovascular, hematology/oncology, fluids/electrolytes, integumentary, gastrointestinal, urinary/male reproductive health alterations.

Credit Hours: 1 Clinic Hours: 48

Prerequisite(s): Minimum grade of B in PNN-115 and PNN-116. Minimum grade of Pass in PNN-117.

Course Type: Technical

PNN-219 Foundations of Nursing Skills Lab

This course provides practical application of basic nursing skills while incorporating concepts learned in previous coursework from bio/psycho/social sciences, humanities, and nursing as well as from current evidence-based literature. Students learn, practice and demonstrate basic nursing skills competency in skills. Emphasis is on the critical elements of nursing procedures and the scientific rationale for performing the procedures correctly.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): Minimum grade of B in PNN-115, PNN-116, and PNN-122. Minimum grade of Pass in PNN-117.

Pre/Co-requisite(s): Minimum grade of B in PNN-214. Minimum grade of (P/F) in PNN-218.

Course Type: Technical

PNN-221 Nursing Clinical IV

This clinical course provides opportunities for students to incorporate concepts from course work in bio/psycho/social sciences, humanities, nursing and current evidence-based literature to provide safe, competent care of adult clients experiencing common basic alterations in body systems. The course utilizes the nursing process in order to achieve best practice outcomes in a medical/surgical setting. Particular emphasis is placed on concepts of holistic care, client education and critical thinking for respiratory, endocrine, musculoskeletal, neurological, sensory, pain, and immune disorders health alterations.

Credit Hours: 1 Clinic Hours: 48

Prerequisite(s): Minimum grade of B in PNN-115, PNN-116, and PNN-122. Minimum grade of Pass in PNN-117 and PNN-118.

Pre/Co-requisite(s): Minimum grade of B in PNN-219. Minimum grade of (P/F) in PNN-215

Course Type: Technical

PNN-319 Issues and Trends in Practical Nursing Leadership

This course is an overview of the role of the licensed practical nurse and introduces students to legal and ethical requirements, scopes of practice, career opportunities, and job searches. Preparation for the licensing exam is also included.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): Minimum grade of B in PNN-115, PNN-116, and PNN-122. Minimum grade of (P/F) in PNN-117, PNN-118.

Pre/Co-requisite(s): Minimum grade of B in PNN-214, PNN-215, PNN-216, and PNN-219.

Course Type: Technical

POL: Political Science

POL-111 American National Government

The study of the United States national government, specifically its institutions, the process of governing, the means by which individual citizens and groups influence that process, and the output of that governing process.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

POL-121 International Relations

This course is an introduction to international politics. The course will examine the underlying forces that shape and constrain how countries behave in the international system, historical patterns of state behavior and the prospect of state cooperation and conflict in the future. Analysis of international relations will be done through the examination of historical events, current events, policy evaluation and scholarly theory.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

POL-125 Comparative Government and Politics

This course introduces the study of politics using a comparative structure. It examines the principles and operation of modern political systems. Emphasis is on the processes in a variety of political systems in the world including democratic, socialist, and totalitarian systems.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

POL-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course may be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

POL-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

POL-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PSY: Psychology

PSY-102 Human and Work Relations

Human Relations is the study of self and social behavior. Emphasis is placed on the understanding and application of social science theories and research for the development of effective interpersonal and organizational relationships.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

PSY-111 Introduction to Psychology

This course provides an introduction to the study of behavior and mental processes with emphasis in such areas as learning, cognition, motivation, personality, behavioral disorder, therapy, and social influence. An understanding of the impact of both theoretical perspectives and experimental evidence on the formulation of the science of human behavior is also stressed. Psychological theories and principles are utilized to explain and predict behavior.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PSY-121 Developmental Psychology

This course presents a life span, developmental approach to the study of the developing person that identifies the behavioral dynamics of the physical, cognitive, social and affective domains of development with a view to the impact of family, school and community.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PSY-241 Abnormal Psychology

Survey of the major classifications of psychological disorders. Emphasis will be on theoretical perspectives, descriptions of disorders, and therapeutic approaches.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): PSY-111.

Course Type: General Education / Transfer

PSY-251 Social Psychology

Provides an introduction to the study of the interrelationship between the individual and social behavior with emphasis in the areas of social cognition, attribution, attitudes, group behavior, prejudice and discrimination, and interpersonal relationships. Basic psychological and sociological perspectives and research findings will be reviewed to better understand individual and social behavior.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): PSY-111 and SOC-110 or instructor approval.

Course Type: General Education / Transfer

PSY-261 Human Sexuality

This course explores the biological, psychological, social, cultural and historical forces that influence human relationships and sexuality. Research and theory are utilized to examine the diversity of human sexual expression.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

PSY-262 Psychology of Gender

This course explores the meaning of gender. Research and theory in the areas of gender development, gender similarities and differences, and the nature and effects of gender roles and stereotypes is emphasized.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): PSY-111.

Course Type: General Education / Transfer

PSY-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit.

May be taken for 1 – 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PSY-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PSY-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

PTA: Physical Therapist Assistant

PTA-111 PTA Fundamentals

This course presents a current and historical perspective on the role of the PTA within the health care team. Activities will introduce posture, body mechanics, and gait analysis, along with positioning and transfer techniques. Concepts of documentation, manual muscle testing, and range of motion assessment are taught.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Prerequisite(s): A minimum grade of C in PGA-120, PTA-150, and PTA-310.

Course Type: Technical

PTA-113 Fundamentals for PTA II

Introduction to physical disabilities and community barriers, independent activities of daily living, prosthetics, orthotics, static/dynamic splints, casts, braces, relaxation training, cardio-pulmonary function, airway clearance techniques, breathing exercises, functional assessment, functional exercise, balance assessment, and balance training.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in PTA-111, PTA-194, PTA-211, PTA-231, and PTA-350.

Course Type: Technical

PTA-120 Kinesiology

This course will present advanced anatomy of the musculoskeletal system with emphasis on joint mechanics, human movement, and palpation of anatomical landmarks. The student will learn the principles of normal and abnormal gait.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of B in BIO-168 and BIO-173. A minimum grade of C in ENG-105, SPC-101, PSY-111, PSY-121, MAT-110, and HSC-113.

Pre/Co-requisite(s): A minimum grade of C in HSC-108.

Course Type: Technical

PTA-150 Pathophysiology

Describes the etiology, signs, symptoms, and treatment of diseases and disorders commonly encountered in physical therapy.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of B in BIO-168 and BIO-173. A minimum grade of C in ENG-105, SPC-101, PSY-111, PSY-121, MAT-110, and HSC-113.

Pre/Co-requisite(s): A minimum grade of C in HSC-108.

Course Type: Technical

PTA-194 Therapeutic Agents I

Introduction to the use of physical modalities for patient treatment. The principles of inflammation, cell repair, pain, and pain management will be introduced. The student will learn the physics, physiology, indications, contraindications, application, and patient preparation for the use of heat, cold, ultrasound, massage, vasocompression, wound care, hydrotherapy, and phonophoresis.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in PTA-120, PTA-150, and PTA-310.

Course Type: Technical

PTA-195 Therapeutic Agents II

This course continues with the study of the physics, physiology, indications, contraindications, and patient preparation for the use of modalities. Focus will be on electrical modalities including iontophoresis, biofeedback, transcutaneous electrical stimulation (TENS), neuromuscular electrical stimulation, high volt, interferential, and microcurrent. The course will also include mechanical traction, continuous passive motion, and laser.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in PTA-111, PTA-194, PTA-211, and PTA-231 and PTA-350.

Course Type: Technical

PTA-211 Musculoskeletal I

This course will present the principles of tissue development, healing and response to physical therapy treatments. Common cervical spine and upper extremity orthopedic diagnosis, physical therapy interventions, and post-operative and injury care protocols will be discussed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in PTA-120, PTA-150, and PTA-310.

Course Type: Technical

PTA-212 Musculoskeletal II

This course will present common lower extremity and thoracolumbar spine orthopedic diagnosis and physical therapy interventions. Post-operative and injury care protocols will be discussed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in PTA-111, PTA-194, PTA-211, PTA-231, and PTA-350.

Course Type: Technical

PTA-231 Therapeutic Exercise for PTA

This course covers the principles of exercise physiology, the application of exercise to treatment plans and injury prevention, equipment, and exercise interventions to improve flexibility, strength, and motor control. Age and gender will be taken into consideration when exploring treatment interventions involving a variety of condition-specific diagnoses.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in PTA-120, PTA-150, and PTA-310.

Course Type: Technical

PTA-248 PTA Neurology

This course presents information on nervous system anatomy, function and normal/abnormal development; therapeutic approaches to central nervous system dysfunction throughout the life cycle; and assessment of the neurologically impaired patient.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C in PTA-111, PTA-194, PTA-211, PTA-231, and PTA-350.

Course Type: Technical

PTA-284 PTA Professional Issues

This course covers topics relevant to the professional development and communication. Topics include history of the physical therapy profession, cultural competence, learning and communications styles, ethical and legal aspects of care, structure and function of institutions, wellness, reimbursement systems and special topics in healthcare. Employment topics including resume writing, interviewing, performance appraisal and work/life issues will be covered. The course also introduces research literacy as it relates to evidence based practice.

Credit Hours: 2 Lecture Hours: 32

Prerequisite(s): A minimum grade of C in PTA-113, PTA-195, PTA-212, PTA-248, and PTA-400.

Course Type: Technical

PTA-310 PTA Clinical I

The course will allow for observation and application of physical therapy interventions and elemental principles of patient care to uncomplicated patients under direct supervision and discretion of the Clinical Instructor. The experience will occur at the end of the summer term, including on-site clinical experience in local settings. This course ensures the student maintains all required health care certifications and documentation.

Credit Hours: 1 Co-op Hours: 64

Pre/Co-requisite(s): A minimum grade of C in PTA-120 and PTA-150.

Course Type: Technical

PTA-350 PTA Clinical II

This course consists of clinical experiences occurring at the end of the semester. The students will have the opportunity to apply skills and knowledge developed in previous course work per the discretion of the Clinical Instructor.

Credit Hours: 2 Co-op Hours: 128

Prerequisite(s): A minimum grade of C in PTA-310.

Pre/Co-requisite(s): A minimum grade of C in PTA-111, and PTA-194, and PTA-211, and PTA-231.

Course Type: Technical

PTA-400 PTA Clinical III

This course consists of clinical experiences occurring at the end of the semester. The students will have the opportunity to apply skills and knowledge developed in previous course work per the discretion of the Clinical Instructor.

Credit Hours: 2 Co-op Hours: 128

Prerequisite(s): A minimum grade of C in PTA-350.

Pre/Co-requisite(s): A minimum grade of C in PTA-113, PTA-195, PTA-212, and PTA-248.

Course Type: Technical

PTA-450 PTA Clinical IV

This course consists of a full-time clinical rotation at one clinical site. The student will continue to apply skills and knowledge obtained from all previous coursework and clinical experiences. Clinical competencies must be completed by the end of this rotation. An oral presentation will be presented to the clinical staff. Location of clinical sites may require travel away from the local region, including out-of-state.

Credit Hours: 5 Co-op Hours: 320

Prerequisite(s): A minimum grade of C in PTA-113, PTA-195, PTA-212, PTA-248, and PTA-400.

Course Type: Technical

PTA-901 Review for Physical Therapist Assistant Board Exam

This course is designed to remediate the content included on the Physical Therapist Assistant board exam.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

RCP: Respiratory Therapy

RCP-100 Introduction to Respiratory Care

This course introduces the student to the fundamentals of Respiratory Care. The field of Respiratory Care will be examined to determine opportunities and policies in the profession. It will establish a strong foundation in bedside assessment including vital signs, chest assessment, evaluating work of breathing, and patient history. Also covered will be the therapeutic uses of medical gases, infection control procedures, and proper maintenance of records. Humidity and aerosol therapy will be studied in detail.

Must complete all Pre-Respiratory courses with a cumulative GPA of 2.75.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

RCP-260 Airway Maintenance Procedures

This course will develop the skills required to assess, diagnose, and manage a patient's airway. It specifically describes the Respiratory Therapist's role in maintaining a patent airway by using lung expansion therapy, bronchial hygiene techniques, and suctioning. The insertion, maintenance, and removal of artificial airways, which include endotracheal tubes and tracheostomy tubes, will be discussed in detail.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Co-requisite(s): A minimum grade of C in RCP-100.

Course Type: Technical

RCP-315 Cardiopulmonary Therapeutics

This course is a general review of the respiratory, circulatory, and renal systems as they apply to respiratory care. The procedure and analysis of arterial blood gas sampling will be discussed in detail along with the pharmacologic interventions used to ease the work of breathing. This course provides a foundation for the study of respiratory and cardiovascular disorders and the interventions made to alleviate them.

Credit Hours: 4 Lecture Hours: 48 Lab Hours: 32

Prerequisite(s): A minimum grade of C in RCP-100 and RCP-260.

Co-requisite(s): A minimum grade of C in RCP-680.

Course Type: Technical

RCP-350 Pulmonary Pathology

This course examines common medical disorders and the effect on the cardiopulmonary system. It includes disorder etiology, anatomic changes, and clinical presentation. Evaluation of signs and symptoms will allow the student to generate a diagnosis and design a multidisciplinary treatment plan. Patient case studies and clinical simulations will be a major focus.

Credit Hours: 3 Lecture Hours: 48

Pre/Co-requisite(s): A minimum grade of C in RCP-315.

Course Type: Technical

RCP-410 Cardio/Pulmonary Diagnostics

This course covers advanced cardiopulmonary diagnostic tests. It includes pulmonary function tests, stress tests, imaging studies, noninvasive monitors, bronchoscopies, cardioversions, polysomnography, indwelling lines, and pulmonary rehabilitation. Ethical issues for Respiratory Therapists will also be discussed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Co-requisite(s): A minimum grade of C in RCP-565 or RCP-690.

Course Type: Technical

RCP-561 Introduction to Ventilator Support

This course prepares the student to initiate and manage invasive and noninvasive mechanical ventilation. Discussion topics will include modes of ventilation, ventilator settings, and ventilator alarm limits. Principles of mechanical ventilation and the effects of positive pressure will also be studied.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of C in RCP-100 and RCP-260.

Pre/Co-requisite(s): A minimum grade of C in RCP-315 or RCP-680.

Course Type: Technical

RCP-565 Intensive Respiratory Care

This course expands the student's ability to oxygenate and ventilate a patient while managing a mechanical ventilator. The student will utilize ventilator graphics to change settings and troubleshoot problems as the patient improves or deteriorates. Special monitoring systems will be discussed, including indwelling arterial lines, cardiac monitors, hemodynamic monitors, transcutaneous monitors, and capnographs. Performance and interpretation of electrocardiograms are highlighted. Medications commonly given to critical patients in the Intensive Care Unit will also be discussed.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in RCP-315 and RCP-561.

Co-requisite(s): A minimum grade of C in RCP-690.

Course Type: Technical

RCP-600 Neonatal/Pediatric Respiratory Therapy

This course provides in-depth knowledge into the complex problems associated with the neonatal and pediatric population. Neonatal and pediatric assessment, monitoring, and respiratory intervention will be a major focus. Abnormal conditions that occur during the transition from fetal development, to the perinatal period, to the pediatric stages of life will also be discussed. Simulation will be used to demonstrate the ability to identify and treat common abnormalities found in this population.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in RCP-100 and RCP-260.

Pre/Co-requisite(s): A minimum grade of C in RCP-680.

Course Type: Technical

RCP-680 Clinical Respiratory Care

This course introduces the student to the hospital setting to develop important skills in communicating with patients and other health care personnel. The student will perform valuable patient assessments as well as basic respiratory care modalities. The modalities included are: oxygen therapy, lung expansion therapy, medication delivery, bronchial hygiene, intubation, extubation, suctioning, tracheostomy care, and ABG sampling.

Credit Hours: 4 Clinic Hours: 192

Prerequisite(s): A minimum grade of C in RCP-100 and RCP-260.

Course Type: Technical

RCP-690 Clinical Intensive Care

This course expands clinical situations into the intensive care units, which includes invasive and noninvasive ventilators and hemodynamically unstable patients. There will be a specialty rotation to develop awareness of different aspects of neonatal, pediatric, and adult ICUs, and other special procedures.

Credit Hours: 8 Clinic Hours: 384

Prerequisite(s): A minimum grade of C in RCP-350, RCP-561, and RCP-680.

Pre/Co-requisite(s): A minimum grade of C in RCP-565.

Course Type: Technical

RCP-875 Respiratory Care Applications

This course is a summary course to combine textbook knowledge with application skills. It will test the student's ability in turning recalled information into better decision-making processes.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C in RCP-350, RCP-561, and RCP-315.

Pre/Co-requisite(s): A minimum grade of C in RCP-410, RCP-565, and RCP-690.

Course Type: Technical

RCP-900 Clinical Preceptor

This course prepares the student for real-life hospital situations. The student will be expected to complete a full work day doing the full workload of an assigned Staff Therapist (preceptor). The student is expected to handle all aspects of respiratory care including interruptions and new situations. The preceptor will monitor the student at all times and will offer support if needed.

Credit Hours: 4 Co-op Hours: 256

Prerequisite(s): A minimum grade of C in RCP-680 and RCP-690.

Course Type: Technical

RCP-910 Respiratory Care RRT Review

This course is designed to test the student's ability to successfully earn passing scores on advanced-level examinations. Although advanced-level examinations will be the focus of this course, review of entry-level examination concepts will also be provided. Mock Board examinations will be administered after completion of a comprehensive review seminar.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

RDG: Reading

RDG-039 College Preparatory Reading II

This course is designed to help students expand their academic vocabulary and improve comprehension skills. Students will learn and utilize a variety of reading strategies to be used in the reading of varying materials and to further their learning in their program of choice.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): RDG-038, appropriate placement scores, or equivalent.

Course Type: Developmental

RDG-040 College Preparatory Reading III

This course provides students with instruction of the reading skills necessary for success in college. Through the use of college-level materials, students are afforded opportunity for demonstration and application of critical reading skills.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): RDG-039, appropriate placement score, or equivalent.

Course Type: Developmental

REL: Religion

REL-101 Survey of World Religions

An introductory survey of world religions that have had major impact on world culture and civilization: Hinduism, Taoism, Buddhism, Confucianism, Judaism, Christianity, Islam, and others. It will examine their cultural settings, sacred writings, key doctrines, central rituals, ethical values, and perspectives on gender roles.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

REL-130 Introduction to Religions of the East

This course is an interdisciplinary course that will explore the emergence, development, and diversification of the three cultural regions? religious traditions. Student participants in the course will explore not only the basic beliefs and practices of these religions but also the ways in which they shape and are shaped by the cultures in which they are embedded. Emphasis will be placed upon understanding these religions as systems of meaning-creation.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SDV: Student Development

SDV-108 The College Experience

This course is designed to orient students to the college campus, resources, services, and expectations. This course also provides a brief overview and practice of study skills and academic strategies.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

SDV-109 College 101

This course provides students a thorough orientation to the college campus and resources. The course is designed to introduce students to the college culture while they examine what a "successful" student is. Students will be introduced to a variety of skills for academic success, academic planning, personal development, and study strategies.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SDV-131 Career Exploration

This course is designed to increase students' knowledge of themselves, of theories about careers, and of various resources available to them which will assist them in the career decision making process. Students, at the completion of this course, will be better able to choose academic majors and careers. This course is specifically designed to follow the National Career Development Guidelines.

Credit Hours: 2 Lecture Hours: 32

Course Type: General Education / Transfer

SDV-149 Exploration of Engineering Careers

This course introduces students to the field of engineering and takes a look at careers in a wide variety of settings. This class will include a number of career exploration methods and experiences, with a focus on college and career readiness and employability skills.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SDV-159 Exploration of Business Careers

This course introduces students to the different fields of business and takes a look at careers in a wide variety of settings. This class will include a number of career exploration methods and experiences, with a focus on college and career readiness and employability skills.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SDV-161 Portfolio Development

This course provides students with the writing and research skill necessary to compile a personal portfolio documenting their prior education, occupational training and work experiences. Students will examine personal, educational, and occupational goals and develop a plan of study which supports their goals and fulfills the requirements of the General Technology program.

Credit Hours: 2 Lecture Hours: 32

Course Type: Technical

SOC: Sociology

SOC-110 Introduction to Sociology

This course surveys the basic principles, concepts, and research findings of social life from small groups to societies. The course examines a range of sociological explanations for the various forms of social behaviors and establishes a basis for reflection and further study in the field.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-115 Social Problems

This course introduces students to a sociological examination of contemporary social problems. Specifically, this course focuses on the interconnection of various social problems, the significance of social inequality in creating and maintaining social problems, and the roles of both human agency and social policy in providing solutions to these problems.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-120 Marriage and Family

Marriage and family is studied from a sociological viewpoint. Content areas focus on the history of family, gender roles, power in relationships, diverse family structures, and functions of the family and dysfunctions. This course examines courtship and marriage, family life cycle, parenthood, interpersonal relationships, and marital adjustments. Upon completion, students should be able to analyze the family as a social institution, and identify social forces which influence its development and change.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-135 Death and Dying

This course provides a basic background on historical and contemporary perspectives on death and dying. Attention is given to current American practices regarding death, as well as cross-cultural interpretation. Emphasis is also placed on the special situation of the terminally ill and bereaved.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-160 Introduction to Social Work

This course provides basic understanding of how American system of social services and the social work profession combine in order to meet the personal and social needs of persons who have been classified as ?at risk? and in need of public assistance. Concepts relevant to social welfare, social change, social support, and structure are examined, including but not limited to legal aspects, systemic and professional goals and values, and various statuses and roles. In addition, various models and theories related to social work and social services will be examined.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-180 Social Work Interactional Skills

This course focuses on students gaining an understanding and beginning mastery of interpersonal and interactional helping skills utilized by social workers in practice. The organization of the course and the learning methods used focus on both didactic and experiential learning. The content of the course is taught through lecture, discussion, and interactional sessions in which the students learn through individual and group exercises, role play, and activity experiences.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): A minimum grade of C- in SOC-160 Introduction to Social Work.

Pre/Co-requisite(s): Passing grade in SOC-181 Field Experience.

Course Type: General Education / Transfer

SOC-181 Field Experience

This course provides students with a beginning “hands-on” experience to examine the operations of a social service agency, to observe the functions and activities of social service workers, and to develop entry-level social service skills with clients. Students will complete a field experience with a social service agency and provided professional supervision by an agency representative who has the educational and professional experience in the student’s field of interest. This initial field experience is helpful to students in determining the compatibility of their own values, personal qualities, skills, and level of commitment to the social work practice. Students will have the opportunity to assess their field experience to make an informed decision on future educational and career plans.

Credit Hours: 1 Lab Hours: 32

Pre/Co-requisite(s): Minimum grade of C in SOC-180 Social Work Interactional Skills.

Course Type: General Education / Transfer

SOC-200 Minority Group Relations

This course examines racial and ethnic relations in the United States. Basic sociological concepts will be applied to historical and contemporary experiences of racial and ethnic groups, with particular attention paid to minority groups.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-205 Diversity in America

This course provides an introduction to the sociological study of group relations in the United States. The focus will be on race, class, and gender. However, other identities (such as religion, sexual orientation, age, and abilities) will also be explored. Students will gain a better understanding of the relationship between individuals and society, as well as the experiences of various minority groups.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-208 Introduction to Cultural Anthropology

This course introduces the student to a comparative study of societies around the world. In this course cultural similarities and differences are explored to illustrate how human beings construct and conduct their existence. It emphasizes the origin and maintenance of the human species by studying its evolution, cultural development, ecology, kinship, organizations, and symbolic expressions. (Same as ANT-105)

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-220 Sociology of Aging

This introductory gerontology course uses sociological tools to examine the influence of an aging society, explores the process of aging, old age as a stage of life and the impact of aging both personally and on society as a whole.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-251 Social Psychology

Provides an introduction to the study of the interrelationship between the individual and social behavior with emphasis in the areas of social cognition, attribution, attitudes, group behavior, prejudice and discrimination, and interpersonal relationships. Basic psychological and sociological perspectives and research findings will be reviewed to better understand individual and social behavior.

Credit Hours: 3 Lecture Hours: 48

Prerequisite(s): PSY-111, SOC-110, or instructor approval.

Course Type: General Education / Transfer

SOC-261 Human Sexuality

This course explores the biological, psychological, social, cultural and historical forces that influence human relationships and sexuality. Research and theory are utilized to examine the diversity of human sexual expression.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SOC-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

SOC-928 Independent Study

This course provides opportunity for a student to focus previous course work and knowledge on a special issue as well as provide for individualized exploration of topics pertinent to the student's projected objectives within any recognized discipline. Faculty consultation is required prior to registration for this course

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

SOC-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

SOC-999 Study Abroad

This course explores relative differences between the student's country and another country with emphasis in discipline of study. Topics include history, geography, culture, food, language, and discipline specific topics. This course can be repeated with different content for credit.

This course can be taken for 1–5 credits hours.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

SPC: Speech

SPC-101 Fundamentals of Oral Communication

This course introduces students to the oral communication process and how it affects human interaction There will be an emphasis on developing interpersonal, small group, and public speaking skills. Students will be involved in activities that provide opportunity for the understanding and improvement of their oral communication skills.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SPC-112 Public Speaking

This course studies the fundamentals of public speaking, emphasizing the process of speech preparation and delivery in various contexts.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SPC-120 Intercultural Communications

Intercultural Communication explores basic principles and theories of intercultural communication with opportunities to gain communication competence through immersion experiences and cross-cultural interactions.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SPC-122 Interpersonal Communication

Interpersonal Communication applies communication theories and concepts to real world friendships, romantic partnerships, families and workplace relationships. The course focuses on improving interpersonal skills and increasing communication competence.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SPC-132 Group Communication

This course focuses on the principles, theories, and processes of small group communication. The primary goal of this course is for students to apply content to group communication situations to function more effectively.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SPC-140 Oral Interpretation

This course will explore literature through performance. Students will learn to select, analyze, interpret and perform literature of various types using vocal and physical techniques.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

SPC-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course may be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

SPC-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

SPC-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

TDT: Truck Driving and Transportation

TDT-101 Interpersonal Relations

This course covers personal and work safety and health, also included in the course are written and oral communication skills. Instruction is provided in employment seeking skills, cover letters, resumes, thank you letters, letters of application, personal record keeping and desirable work attitude.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

TDT-115 Transportation Industry and Driver Regulations

This course is an introduction to the surface transportation network and the trucking industry. Employment opportunities, company and driver regulations by the Department of Transportation and other Federal and State agencies will be covered.

Credit Hours: 4 Lecture Hours: 32 Lab Hours: 64

Course Type: Technical

TDT-118 Driving Range I

This course provides students with opportunities for hands-on experience in basic maneuvers using simulators, trucks and trailers. Proper techniques are taught in engine starting and shut down, clutching, shifting, cornering, and backing. Emphasis is given to proper safety and technical practices.

Credit Hours: 6 Lecture Hours: 16 Lab Hours: 160

Co-requisite(s): TDT-115.

Course Type: Technical

TDT-125 Driving Range II

This course prepares students with more opportunity for additional behind the wheel training in operating trucks in a rural and city setting, including nighttime driving skills and knowledge in managing emergencies, accidents, first aid, CPR and Department of Transportation regulations on transporting hazardous materials. Students will prepare for a Class A Commercial Driver's License with all endorsements.

Credit Hours: 3 Lab Hours: 96

Prerequisite(s): A minimum grade of D in TDT-115.

Course Type: Technical

TDT-938 Truck Transportation On-the-Job Training

Students enrolled in this course will have the opportunity to gain on-the-job experience in the Motor Carrier industry. Students will learn the responsibilities of driving, cargo handling, vehicle maintenance, safety department, and dispatch of equipment to customers. Students will have an opportunity to learn the skills necessary to succeed in the transportation field. Coordination and guidance will be provided by instructors.

Credit Hours: 3 Co-op Hours: 192

Prerequisite(s): A minimum grade of D in TDT-100, TDT-115, and TDT-118.

Course Type: Technical

WBL: Work-Based Learning

WBL-100 Exploring Careers

This course will provide guidance in choosing a career goal and preparing for employment. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment, emphasizing the development of characteristics associated with job success. This course can be taken for 1 – 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-101 Exploring Careers: Agriculture, Food, and Natural Resources

This course will provide guidance in choosing a career goal and preparing for employment in Agriculture, Food, and Natural Resources careers. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment in these fields, emphasizing the development of characteristics associated with job success. This course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-102 Exploring Careers: Science, Technology, Engineering, and Mathematics

This course will provide guidance in choosing a career goal and preparing for employment in Science, Technology, Engineering, or Manufacturing careers. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment in these fields, emphasizing the development of characteristics associated with job success. This course can be taken for 1 – 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-103 Exploring Careers: Human Services

This course will provide guidance in choosing a career goal and preparing for employment in Human Services careers. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment in these fields, emphasizing the development of characteristics associated with job success. This course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-104 Exploring Careers: Health Sciences

This course will provide guidance in choosing a career goal and preparing for employment in Health Sciences careers. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment in these fields, emphasizing the development of characteristics associated with job success. This course can be taken for 1 – 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-105 Exploring Careers: Business, Finance, Marketing, and Management

This course will provide guidance in choosing a career goal and preparing for employment in Business, Finance, Marketing, and Management careers. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment in these fields, emphasizing the development of characteristics associated with job success. This course can be taken for 1 – 3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-106 Exploring Careers: Information Solutions

This course will provide guidance in choosing a career goal and preparing for employment in Information Solutions careers. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment in these fields, emphasizing the development of characteristics associated with job success. This course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-107 Exploring Careers: Applied Digital, Visual, and Communication Arts

This course will provide guidance in choosing a career goal and preparing for employment in Applied Digital, Visual, and Communication Arts careers. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment in these fields, emphasizing the development of characteristics associated with job success. This course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-108 Exploring Careers: Industrial Technology

This course will provide guidance in choosing a career goal and preparing for employment in Industrial Technology careers. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment in these fields, emphasizing the development of characteristics associated with job success. This course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-109 Exploring Careers: Government and Criminal Justice

This course will provide guidance in choosing a career goal and preparing for employment in Government and Criminal Justice careers. Emphasis will be placed on identifying interests, abilities, and values, and exploring options for careers. Students will learn how to access labor market information and employment trends. Additionally, students will develop the skills and aptitudes necessary to obtain employment in these fields, emphasizing the development of characteristics associated with job success. This course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WBL-110 Employability Skills

This course is designed to assist students in developing the skills necessary to obtain employment and to learn and practice the skills and attitudes required for job success. Students will practice resume writing, job application completion, and interviewing techniques. Additionally, students will practice workplace problem solving strategies, and demonstrate skills required to work in a diverse environment.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

WBL-140 Workplace Project Based Learning: Information Solutions

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies. Projects are developed under the supervision of a college faculty member. This course can be taken for 2 or 3 credits.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

WBL-140 Workplace Project Based Learning: Information Solutions

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies. Projects are developed under the supervision of a college faculty member. This course can be taken for 2 or 3 credits.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 96

Course Type: Technical

WBL-141 Workplace Project Based Learning: Agriculture, Food, and Natural

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Agriculture, Food, and Natural Sciences employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credits.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

WBL-142 Workplace Project Based Learning: Science, Technology, Engineering, and Mathematics

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Applied Sciences, Technology, Engineering, and Manufacturing employment sector. Projects are developed under the supervision of a college faculty member. This update has been made.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 96

Course Type: Technical

WBL-142 Workplace Project Based Learning: Science, Technology, Engineering, and Mathematics

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Applied Sciences, Technology, Engineering, and Manufacturing employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2 or 3 credits.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

WBL-143 Workplace Project Based Learning: Human Services

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Human Services employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credits.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

WBL-144 Workplace Project Based Learning: Health Sciences

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Health Sciences employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credits.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

WBL-144 Workplace Project Based Learning: Health Sciences

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Health Sciences employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credits.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

WBL-145 Workplace Project Based Learning: Business, Finance, Marketing

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Business, Finance, Marketing, and Management employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credits.

Credit Hours: 2 Lecture Hours: 16

Course Type: Technical

WBL-145 Workplace Project Based Learning: Business, Finance, Marketing

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Business, Finance, Marketing, and Management employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credits.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

WBL-146 Workplace Project Based Learning: Information Solutions

Students in this course learn the concept of project based learning in the workplace and will develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Information Solutions employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credit hours.

Credit Hours: 2 Lecture Hours: 0 Lab Hours: 64

Course Type: Technical

WBL-146 Workplace Project Based Learning: Information Solutions

Students in this course learn the concept of project based learning in the workplace and will develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Information Solutions employment sector. Projects are developed under the supervision of a college faculty member.

Credit Hours: 3 Lecture Hours: 0 Lab Hours: 96

Course Type: Technical

WBL-147 Workplace Project Based Learning: Applied Digital, Visual, and Communication Arts

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Applied Digital, Visual, and Communication Arts employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credits.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

WBL-148 Workplace Project Based Learning: Industrial Technology

Students in this course will learn the concept of project-based learning in the workplace and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Industrial Technology employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credits.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

WBL-149 Workplace Project Based Learning: Government and Criminal Justice

Students in this course learn the concept of project based learning in the workplace, and develop and implement projects in cooperation with local businesses, community organizations, or non-profit agencies in the Government and Criminal Justice employment sector. Projects are developed under the supervision of a college faculty member. This course can be taken for 2–3 credits.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

WBL-150 Job Shadowing

Students in this course will explore a field of interest while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces of interest to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization’s structure and values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WBL-151 Job Shadowing: Agriculture, Food, and Natural Resources

Students in this course will explore the field of Agriculture, Food, and Natural Resources while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization’s structure and values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WBL-152 Job Shadowing: Science, Technology, Engineering, and Mathematics

Students in this course will explore the field of Science, Technology, Engineering, and Manufacturing while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization's structure and values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WBL-153 Job Shadowing: Human Services

Students in this course will explore the field of Human Services while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization's structure and values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WBL-154 Job Shadowing: Health Sciences

Students in this course will explore the field of Health Sciences while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization’s structure and values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WBL-155 Job Shadowing: Business, Finance, Marketing, and Management

Students in this course will explore the fields of Business, Finance, Marketing, and Management while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization's structure and values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WBL-156 Job Shadowing: Information Solutions

Students in this course will explore the field of Information Solutions while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization’s structure and values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WBL-157 Job Shadowing: Applied Digital, Visual, and Communication Arts

Students in this course will explore the field of Applied Digital, Visual, and Communication Arts while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization's structure and values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WBL-158 Job Shadowing: Industrial Technology

Students enrolled in this course will explore the field of Industrial Technology while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of an organization's structure and workplace values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WBL-159 Job Shadowing: Government and Criminal Justice`

Students in this course will explore the field of Government and Criminal Justice while developing research skills, professionalism, and building occupational knowledge. Students will visit workplaces in this employment sector to learn about specific jobs and professional requirements, and to develop a basic knowledge of the organization’s structure and values. This course can be taken for 1–2 credits.

Credit Hours: 1 Lecture Hours: 8 Lab Hours: 16

Course Type: Technical

WDV: Web Development

WDV-102 Introduction to Web Development

This course introduces the current standard of HTML and discusses upcoming versions. Students will learn the basics of CSS for design and layout using both text and multimedia. Website maintenance cycles and roles used in the cycles will be introduced. By using FTP, students will create and maintain small web page on a live web server. By using a text based editor, student will learn to code in an HTML editor rather than just the visual aspect to gain greater control of the code. Best design practices will be introduced.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

WDV-105 Web Layouts

This course is designed to give the student the knowledge of layouts and design of web sites. Students will use a graphic editor, such as Adobe Photoshop, to convert a visual image layout to a working HTML and CSS layout. This course goes over aspects of design to content in making a great web site.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

WDV-221 JavaScript

The course will introduce the concepts of the JavaScript programming language and its related logic structures within an Internet browser. This course will discuss the concepts of Dynamic HTML which is the interactions of JavaScript, Cascading Style Sheets (CSS), HTML, and the Document Object Model. Students will create dynamic forms, change content, and perform client-side user-driven activities within a web page application.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

WDV-300 Advanced Topics in Web Development

This course is designed to give students a more in depth study of web sites. Topics will include security, troubleshooting/debugging, testing and analytics. The course will help the students develop a toolbox of techniques to improve their programming skills for web application development.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CIS-121 and CIS-231.

Course Type: Technical

WDV-321 Advanced Javascript

Use Javascript to implement client-side form data validation, browser compatibility, and motion as well as other dynamic content changes. Create dynamic cross-browser compatible user-driven presentation and content with Javascript and CSS.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Course Type: Technical

WDV-600 Project Development

This course is designed to allow students to create a showcase project of their skills in a format and language of the student's choice. Project management skills introduced from other classes will be reinforced.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): A minimum grade of C in CIS-217 and CIS-225.

Course Type: Technical

WDV-800 Portfolio

This course will help students present the best possible portfolio. This course will guide students in picking the right pieces to exemplify their skills. Students will create a portfolio to take job hunting. Students will learn about a number of aspects in job hunting. Students will also do a team based project for their portfolio.

Credit Hours: 3 Lecture Hours: 32 Lab Hours: 32

Prerequisite(s): Must be a 4th semester graduating student to take this class.

Course Type: Technical

WDV-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course can be repeated with different content for credit. This course can be taken for 1–3 credit hours.

Credit Hours: 1 Lecture Hours: 32

Course Type: Technical

WDV-930 Internship

This course provides students with the opportunity to gain practical work experience, while applying skills and techniques learned in their program of study, under the supervision of an employer, manager, or supervisor.

Credit Hours: 3 Co-op Hours: 192

Prerequisite(s): A minimum grade of C in CIS-217 and CIS-225 and CIS-206.

Course Type: Technical

WDV-931 Internship

This course provides students with the opportunity to gain practical work experience, while applying skills and techniques learned in their program of study, under the supervision of an employer, manager, or supervisor.

Credit Hours: 2 Co-op Hours: 128

Prerequisite(s): A minimum grade of C in CIS-231, CIS-215, and instructor approval.

Course Type: Technical

WEL: Welding

WEL-106 Welding Design

This course will examine the principles behind joint design of welded fabrications, the contributing stress imposed by the welding and heating of materials during construction and the calculated measures taken to ensure sound welding design. Different procedures of joint design and weld strength will also be discussed.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WEL-201 Procedures and Qualifications

This is a facilitated course designed to make the student aware of proper welding procedures, qualification records, and procedure specifications found in industry. This course helps prepare the student who will become a welding supervisor or inspector.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WEL-228 Introduction to Welding, Safety, and Health of Welders: SENSE1

Provides students with orientation to the welding profession and will cover the basics of safety and health within the welding profession. This course aligns to SENSE Level 1, Module 1 and Module 2 – Key Indicators 1-6.

Credit Hours: 1 Lecture Hours: 16

Course Type: Technical

WEL-233 Print Reading and Welding Symbol Interpretation: SENSE1

Provides instruction in interpreting elements of welding prints (drawings or sketches), focusing on measurement, American Welding Society welding symbols, and fabrication requirements. Students will demonstrate how to prepare, assemble and tack weld parts according to drawings or sketches, using proper materials and tools. This course aligns to SENSE Level 1 Module 3: Drawing and Welding Symbol Interpretation, Key Indicators 1 and 2.

Credit Hours: 3 Lecture Hours: 48

Course Type: Technical

WEL-244 Gas Metal Arc Welding Short Circuit Transfer: SENSE1

Focuses on proper weld safety, machine setup and welding techniques of Gas Metal Arc Welding Short-Circuiting Transfer. Students perform American Welding Society compliant welds on carbon steel, in flat, horizontal, vertical and overhead positions. This course will prepare students to take an AWS welder certification test, which is recommended for its successful completion. This course aligns with SENSE Level 1 Module 5: Gas Metal Arc Welding Key Indicators 1-7. Also aligns to SENSE Level 3, Drawing and Welding Symbol Interpretation, Key Indicator 3.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in WEL-228.

Course Type: Technical

WEL-245 Gas Metal Arc Welding Spray Transfer: SENSE1

Focuses on proper weld safety, machine setup and welding techniques of Gas Metal Arc Welding Spray Transfer. Students perform American Welding Society compliant welds on carbon steel in flat and horizontal positions. This course will prepare students to take an AWS welder certification test, which is recommended for its successful completion. It aligns with SENSE Level 1 Module 5 Key Indicators 1, 2 and 8-12, as well as Module 2 - Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Pre/Co-requisite(s): A minimum grade of C- in WEL-228.

Course Type: Technical

WEL-251 Gas Tungsten Arc Welding for Carbon Steel: SENSE1

Focuses on proper weld safety, machine setup and welding techniques for Gas Tungsten Arc Welding. Students perform American Welding Society compliant welds on carbon steel in flat, horizontal, vertical and overhead positions. This course will prepare students to take an AWS welder certification test, which is recommended for successful completion of this course. This course aligns to SENSE Level 1, Module 7 – Key Indicators 1-7, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in WEL-228.

Co-requisite(s): A minimum grade of C- in WEL-252 and WEL-253.

Course Type: Technical

WEL-252 Gas Tungsten Arc Welding for Aluminum: SENSE1

Focuses on proper welder safety, machine setup and welding techniques for Gas Tungsten Arc Welding (GTAW). Students perform American Welding Society (AWS) compliant welds on aluminum in flat and horizontal positions. This course will prepare students to take an AWS welder certification test, which is recommended for successful completion of this course. This course aligns to SENSE Level I, Module 7 Key Indicators 1, 2 and 13 – 17, as well as Module 2 - Key Indicator 7, Module 3 - Key Indicator 3, and Module 9 – Key Indicator 2.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in WEL-228.

Co-requisite(s): A minimum grade of C- in WEL-253, WEL-354, and WEL-355.

Course Type: Technical

WEL-253 Gas Tungsten Arc Welding for Austenitic Stainless Steel: SENSE1

This course focuses on proper weld safety, machine setup and welding techniques for Gas Tungsten Arc Welding (GTAW). Students perform American Welding Society (AWS) compliant welds on austenitic stainless steel in flat, horizontal, and vertical positions. This course will prepare students to take an AWS welder certification test, which is recommended for successful completion of this course. This course aligns to SENSE Level I, Module 7 Key Indicators 1, 2 and 8-12 as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Credit Hours: 1 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in WEL-228.

Co-requisite(s): A minimum grade of C- in WEL-252, WEL-354, and WEL-355.

Course Type: Technical

WEL-254 Welding Inspection and Testing Principles: SENSE1

Students will visually examine test weldments and thermally cut surfaces per multiple welding codes, standards, and specifications. This course aligns to SENSE Level I, Module 9: Welding Inspection and Testing Principles.

Credit Hours: 1 Lecture Hours: 16

Prerequisite(s): A minimum grade of C- in WEL-233.

Course Type: Technical

WEL-262 Thermal Cutting Processes I - Manual and Mechanized OxyFuel Cutting: SENSE1

Focuses on proper safety, equipment setup and cutting techniques for manual and mechanized OxyFuel cutting on carbon steel. Students perform American Welding Society compliant cutting operations in the flat position. The student will also perform scarfing and gouging operations to remove base and weld metal in flat and horizontal positions on carbon steel. This course aligns to SENSE Level 1 Module 8 - Units 1 and 2, as well as Module 2 - Key Indicator 7 and Module 9 – Key Indicator 1.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Pre/Co-requisite(s): A minimum grade of C- in WEL-228.

Course Type: Technical

WEL-263 Thermal Cutting Processes II - Plasma and Carbon Steel Arc: SENSE1

Focuses on proper safety, equipment setup and cutting techniques for Plasma and Carbon steel Arc cutting on carbon steel, austenitic stainless steel, and aluminum. Students perform American Welding Society compliant cutting operations in the flat position. The student will also perform scarfing and gouging operations to remove base and weld metal in flat and horizontal positions. This course aligns to SENSE Level 1 Module 8 - Units 3 and 4, as well as Module 2 - Key Indicator 7 and Module 9 – Key Indicator 1.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Pre/Co-requisite(s): A minimum grade of C- in WEL-228.

Course Type: Technical

WEL-274 Shielded Metal Arc Welding I: SENSE1

Focuses on safety, amperage settings, polarity and the proper selection of electrodes for the shielded metal arc welding process. Students will perform American Welding Society compliant welds on carbon steel, using visual and destructive methods for determining weld quality. This course aligns to SENSE Level 1 Module 4 - Key Indicators 1-7 for the flat and horizontal positions, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Pre/Co-requisite(s): A minimum grade of C- in WEL-228.

Course Type: Technical

WEL-275 Shielded Metal Arc Welding II: SENSE1

Focuses on safety, amperage settings, polarity and the proper selection of electrodes for the Shielded Metal Arc Welding (informally known as stick welding) process. Students perform American Welding Society complaint welds on carbon steel, in vertical up and overhead configurations, using visual and destructive methods for determining weld quality. This course aligns to SENSE Level 1 Module 4: Shielded Metal Arc Welding Key Indicators 1-7 for the flat and horizontal positions, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): A minimum grade of C- in WEL-228.

Pre/Co-requisite(s): A minimum grade of C- in WEL-274.

Course Type: Technical

WEL-280 Flux Cored Arc Welding (Self-Shielded): SENSE1

Focuses on proper weld safety, machine setup and welding techniques for Flux Cored Arc Welding Self-Shielded. Students perform American Welding Society compliant welds on carbon steel in flat, horizontal, vertical and overhead positions. This course will prepare students to take an AWS welder certification test, which is recommended for its successful completion. It aligns to SENSE Level 1 Module 6 - Key Indicators 1, 2 and 8-12, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in WEL-288 and WEL-245.

Course Type: Technical

WEL-281 Flux Cored Arc Welding (Gas-Shielded): SENSE1

Focuses on proper weld safety, machine setup and welding techniques for Flux Cored Arc Welding (Gas Shielded). Students perform American Welding Society compliant welds on carbon steel in flat, horizontal, vertical and overhead positions. This course will prepare students to take an AWS welder certification test, which is recommended for its successful completion. It aligns to SENSE Level 1, Module 6 - Key Indicators 1-7, as well as Module 2 - Key Indicator 7, Module 3- Key Indicator 3, and Module 9 – Key Indicator 2.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Prerequisite(s): A minimum grade of C- in WEL-228 and WEL-245.

Course Type: Technical

WEL-296 Pipe Welding GTAW

Students will learn how to appropriately prepare, fit, and subsequently weld pipe in the 2G and 5G positions on carbon steel with the GTAW process.

Credit Hours: 5 Lecture Hours: 16 Lab Hours: 128

Pre/Co-requisite(s): A minimum grade of C- in WEL-303, WEL-251, and WEL-253.

Course Type: Technical

WEL-303 Pipe Welding SMAW

This course is an introduction to vertical down and vertical up pipe welding procedures and techniques. Topics include: safety, elements of the American Petroleum Institute Pipe Welding Code and the American Society of Mechanical Engineers Pipe Welding Code and the American Welding Society Structural Steel Pipe Welding Code.

Credit Hours: 3 Lab Hours: 96

Prerequisite(s): A minimum grade of C- in WEL-275 and WEL-375.

Course Type: Technical

WEL-339 Electromechanical Maintenance

This course is a basic introduction to welding and cutting processes. Topics include: shielded metal arc welding, gas metal arc welding, and gas tungsten arc welding. Cutting processes include oxy-fuel cutting and plasma arc cutting. Electric arc and oxy-fuel safety rules will be discussed.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

WEL-346 GMAW Developmental I

This lab course will supplement content from Gas Metal Arc Welding (GMAW) I. Students will have the opportunity to further develop the skills for spray transfer welding including, but not limited to, manipulation of electrodes, determining changes in operating variables and applying welding methods to the five basic joints.

Credit Hours: 2 Lab Hours: 64

Prerequisite(s): Minimum grade of C- in WEL-228

Co-requisite(s): Minimum grade of C- in WEL-245

Course Type: Technical

WEL-347 GMAW Developmental II

This lab course will be a continuance of Gas Metal Arc Welding (GMAW) methods. Students will perform within compliance of American Welding Society (AWS) codes, standards and regulations.

Credit Hours: 2 Lab Hours: 64

Prerequisite(s): Minimum grade of C- in WEL-228

Co-requisite(s): Minimum grade of C- in WEL-244

Course Type: Technical

WEL-353 GTAW Developmental

This lab course will be a continuance of GTAW methods. Students will perform within AWS codes, standards and regulations.

Credit Hours: 1 Lab Hours: 32

Co-requisite(s): WEL-251, WEL-252, and WEL-253.

Course Type: Technical

WEL-354 Gas Tungsten Arc Welding for Carbon Steel

Focuses on proper weld safety, machine set-up and welding techniques for Gas Tungsten Arc Welding (GTAW). Students preform American Welding Society (AWS) compliant welds on carbon steel in flat, horizontal, vertical and overhead positions, including open root. This course will prepare students to take AWS welder certification tests, which are recommended for successful completion of this course. This course aligns to SENSE Level 1, Module 7 Key Indicators 1-7, as well as Module 2 Key Indicator 7, Module 3 Indicator 3, and Module 9 Key Indicator 2.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Prerequisite(s): Minimum grade of C- in WEL-228

Co-requisite(s): Minimum grade of C- in WEL-252 and WEL-355

Pre/Co-requisite(s): Minimum grade of C- in WEL-253

Course Type: Technical

WEL-355 Gas Tungsten Arc Welding: Developmental

This lab course will be a continuance of Gas Tungsten Arc Welding (GTAW) methods. Students will perform welds according to American Welding Society (AWS) codes, standards and regulations. Students will examine, record, and test weldments and thermally cut surfaces per multiple welding codes, standards and specifications.

Credit Hours: 3 Lab Hours: 96

Prerequisite(s): Minimum grade of C- in WEL-228

Co-requisite(s): Minimum grade of C- in WEL-354, WEL-253, and WEL-252

Course Type: Technical

WEL-374 SMAW Developmental I

This lab course will be a continuance of Shielded Metal Arc Welding methods. Students will perform within compliance of American Welding Society codes, standards and regulations.

Credit Hours: 2 Lab Hours: 64

Co-requisite(s): WEL-274.

Course Type: Technical

WEL-375 SMAW Developmental II

This lab course will supplement content from Shielded Metal Arc Welding II. Students will have the opportunity to further develop the skills for out of position welding including, but not limited to, manipulation of electrodes, determining changes in operating variables and applying welding methods to the five basic joints.

Credit Hours: 2 Lab Hours: 64

Co-requisite(s): WEL-275.

Course Type: Technical

WEL-402 Tool Steel Welding and Heat Treatment

This course is an introduction to the fundamental operations of selecting, welding and heat treating tool steels. Classroom and shop instruction is given in welding safety, welding equipment, selection and manipulation of electrodes and the procedures in welding alloy and tool steels It will cover steel selection and basic heat treatment. Lab and class emphasis is on the changes that happen when steel is heated and cooled by welding as well as heat treating.

Credit Hours: 2 Lecture Hours: 16 Lab Hours: 32

Course Type: Technical

WEL-701 Robotic Welding

This course is an introduction to robotic welding. Students will learn the advantages and limitations of welding robots and their current application in modern manufacturing. Robot components and basic robot programming are covered in detail.

Credit Hours: 3 Lecture Hours: 16 Lab Hours: 64

Course Type: Technical

WEL-928 Independent Study

This course provides opportunity for a student to focus previous course work and knowledge on a special issue as well as provide for individualized exploration of topics germane to the student's projected objectives within any recognized discipline. Faculty consultation is required prior to registration for this course. May be taken for 1 or 2 credits. This course is repeatable with different content for credit.

Credit Hours: 1 Lab Hours: 32

Course Type: Technical

WST: Women's Studies

WST-101 Women's Studies

This course serves as an introduction to the interdisciplinary field of women's studies and to current women's issues in our society. It explores ways in which women get marginalized and silenced primarily by the social definitions and the patriarchal male power structure. The course seeks to help students develop critical thinking relative to contemporary gender issues; to explore their assumptions about gender; to illuminate social constructions of femininity and women's roles; and to uncover the ways in which social teachings shape and limit women's lives.

Credit Hours: 3 Lecture Hours: 48

Course Type: General Education / Transfer

WST-924 Honors Project

This course involves in-depth independent research on an approved topic under supervision of a faculty member. Upon project's completion, results will be shared with community of peers and faculty. This course can be repeated with different content for credit. This course may be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

WST-928 Independent Study

This course provides students with an opportunity to pursue or investigate a topic of interest that does not fit within the framework of regular course offerings. An independent study self-directed learning agreement must be discussed with and submitted to a faculty advisor prior to registration. This course may be repeated for credit with different content. Course can be taken for 1–3 credits.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer

WST-949 Special Topics

Special Topics expands the curriculum by allowing students to enroll for up to three credits in a specific course or program area. Subject matter may be an in-depth extension of the particular area and is developed by the teaching faculty to meet unique interests and needs of the students. This course may not duplicate another one already in the catalog. This course may be repeated for credit with different content. This course can be taken for 1–3.

Credit Hours: 1 Lecture Hours: 16

Course Type: General Education / Transfer