



**METROPOLITAN**  
Community College

## **CAREER ACADEMY PROGRAM PACKET 2024-2025**



### ***To Apply for a Career Academy:***

Applications are available December 1, 2023 from your high school counselor, and online at [mccneb.edu/careeracademy](https://mccneb.edu/careeracademy). All applicants must complete an application for MCC prior to submitting their Career Academy application. Application can be completed at [www.mccneb.edu/apply](https://www.mccneb.edu/apply).

Please submit the application to [secondarypartnerships@mccneb.edu](mailto:secondarypartnerships@mccneb.edu).

**Application Deadline: March 8, 2024.**

#### **QUESTIONS:**

If you have questions about the MCC Career Academy Program, please contact one of the following:

- Your high school counselor
- Secondary Partnerships 531-MCC-2213 or [secondarypartnerships@mccneb.edu](mailto:secondarypartnerships@mccneb.edu)

# **CAREER ACADEMY**

## **PROGRAMS, SCHEDULE, AND DESCRIPTIONS**

### **2024-2025**

MCC's Career Academy program is designed to provide high school juniors and seniors with opportunities to jumpstart their postsecondary education. MCC Career Academies increase student knowledge in various career fields prior to high school graduation, so more informed career choices can be made. Through a MCC Career Academy, students gain practical skills for specific career areas, knowledge of safety procedures, job-seeking skills, interpersonal skills for the workplace, and exposure to a college environment.

#### **ELIGIBILITY REQUIREMENTS:**

- Must be a high school junior or senior
- Must be 16 years old and meet any criteria listed in program description
- Must have transportation to and from classes and internship/apprenticeship/clinical site
- Must complete an application and be selected to participate
- GPA of at least 2.0 preferred. Below 2.0 greatly reduces the applicant's chance of acceptance.

#### **LENGTH OF PROGRAM:**

Students begin the program in their junior or senior year, starting in the fall. Most Career Academy programs are one year in length and provide students with a solid foundation in each area of interest.

Students may wish to take additional MCC courses, CollegeNOW!, which apply towards a certificate or an associate's degree. Visit our website [www.mccneb.edu/secondarypartnerships](http://www.mccneb.edu/secondarypartnerships) for more information about our CollegeNOW! program and/or MCC Career Academies.

#### **TIME OF DAY:**

Students are expected to commit one-half of each school day to the Career Academy, from approximately 1:00 p.m. to 3:00 p.m. Specific program class times are listed on the program information page.

MCC reserves the right to cancel or modify courses.

#### **COLLEGE AND HIGH SCHOOL CREDIT:**

MCC credit is granted for the courses students successfully complete in the MCC Career Academy. Each high school/district determines whether or not high school credit is also awarded for the Career Academy course work. Please check with your high school counselor to see how MCC credit may be awarded for high school credit. For information about transferring course credit to other higher education institutions, it is best to contact the institution that will receive the credit. Visit MCC's webpage, [www.mccneb.edu/articulation](http://www.mccneb.edu/articulation) for additional information.

#### **COURSE CAPACITY:**

Course capacities range from 10 to 22 students per program. Space is limited due to the number of workstations, room size, and equipment. Course capacity is subject to change due to current classroom space guidelines.

#### **CURRICULUM:**

Specific entry-level courses are determined by MCC faculty, secondary school officials, and business partners. Based on classes taken, students complete between 10–36 credit hours of college-level coursework per year. Refer to the program section to view courses for each individual academy.

***Students participating in a Career Academy must maintain a 2.0 GPA (C or better) to continue in the academy quarter to quarter.***

**GRADES:**

Grades for each college course are derived using the criteria identified in the course syllabus developed by the faculty. Students receive a course syllabus at the beginning of each class. The MCC academic calendar is quarter based, and the high schools are semester based. Since MCC quarters start and end dates do not coincide with the high school semester start and end dates, for a short period of time your student's MCC grade on his/her high school report card may reflect NG (no grade). MCC grades are assigned when the quarter ends and are reported to the high schools at that time. The high school will report the MCC grade when available.

**CALENDAR:**

Students must abide by the MCC Calendar. This has special meaning for seniors since they may have to continue attending classes beyond their graduation date or beyond their last day of class at their high school.

<b>Fall Quarter</b> 2024 24/FA	Labor Day Recess/College closed Classes begin Classes end	September 2 September 3 November 18	Monday Tuesday Monday
<b>Winter Quarter</b> 2024 - 2025 24/WI	Thanksgiving Day Recess/College closed Classes begin Last class day before Holiday Recess Holiday Recess/College closed  Classes resume Martin Luther King Recess/College closed Classes end	November 28 – 29 December 2 December 23 December 25 – January 1 January 2 January 20 February 26	 Monday Monday  Thursday Monday Wednesday
<b>Spring Quarter</b> 2025 24/SP	Classes begin Spring Recess/College closed  Classes End	March 7 April 19-20  May 22	Friday Saturday- Sunday Thursday

**INSTRUCTOR ABSENCES:**

In the event of an instructor's absence, MCC will attempt to hire a substitute instructor. If a substitute instructor is unable to fill-in, then class will be cancelled. An attempt will be made to notify each individual student through their MCC email of the cancellation.

**REGISTRATION:**

In April, students selected for the Career Academy will receive an acceptance letter to the email address provided in their application. Included with the acceptance letter will be the student registration form and Career Academy orientation information.

Students may be registered into courses with MCC students who are not high school students.

**FERPA:**

Students who wish to grant parental, spouse, or 3rd party access to their educational records may do so by submitting an Authorization to Release Student Information Form to the Records Office. Students complete this form when applying to MCC.

## TUITION, BOOKS, AND FEES

### **TUITION PAYMENT:**

Tuition for the 2024-2025 academic year will be waived for Nebraska High School students. Students are responsible for payment of all textbooks and fees unless other arrangements are made by the school district or an outside agency. Information about registration and payment procedures are included with the acceptance letter. Textbooks are required to be purchased prior to the first day of class. Any course fees are due prior to the start of each MCC quarter.

### **BOOKS:**

Students will purchase their textbooks. Bookstores are located at MCC's Elkhorn, Fort and South campuses. Books are subject to change, dependent upon the course criteria and without prior notice. Please go to Follett Bookstore's web site at [www.efollett.com](http://www.efollett.com) start typing in Metropolitan Community College. For classes held at the South Campus, Online or Sarpy Center select South Omaha; for classes held at the Applied Technology Center or Fort Campus select Omaha; for classes at the Elkhorn Campus or Fremont Center select Elkhorn.

### **TOOLS & EQUIPMENT:**

MCC provides, on loan, most of the appropriate equipment and tools. Specific programs require students to purchase T-shirts, work boots, safety glasses, and certain tools. Instructors will inform students during the first week of class if additional tools or supplies are needed. ***Students are financially responsible for lost or broken tools and equipment.***

## STUDENT RESPONSIBILITIES

### **ATTENDANCE:**

Students are expected to abide by the Metropolitan Community College (MCC) Career Academy calendar which follows the traditional MCC schedule. ***If your high school is closed due to the high school scheduled holiday/break or inclement weather, as an MCC student, you are still expected to attend your MCC class.***

Class attendance is taken daily. All absences and tardies are reported to the student's high school. See your instructor's syllabus for specific attendance requirements. **Attendance policies vary by each program.** Absences above the allowed days may result in failure of the class and being dropped from the Academy. Any missed classroom activities remain the responsibility of the student.

**NOTE: Non-attendance does not equal a withdrawal or relieve you from your obligation to pay.**

### **CONFIDENTIALITY:**

A level of privacy exists in each career field. What students see in customers' homes/automobiles/documents should remain confidential. A student who observes something questionable in class or at the worksite should discuss the matter with the internship supervisor immediately.

### **DRESS CODE:**

Each Career Academy program has an established dress code. Students must follow the code as stated by the instructor, as well as by what is dictated by professional safety standards. In some programs, specific protective gear may be required. Individual classes and/or business sites may have dress codes by which students must abide.

### **INCLEMENT WEATHER:**

On days when the weather is questionable, students should check MCC Website—[mccneb.edu](http://mccneb.edu), local radio and television stations, or call the MCC Weather Hotline at 531-622-2499. If MCC is closed, the Career Academy classes will be cancelled.

### **TRANSPORTATION:**

Students must provide their own transportation to the appropriate MCC campus or center.

## DISABILITY SUPPORT SERVICES

MCC values the differences and commonalities of its members. Through its day to day operations and interactions, MCC demonstrates an appreciation for differences while striving to maintain the common focus of delivering a quality education for all students. MCC embraces its responsibility to promote, encourage, and foster diversity.

### DELIVERY OF SERVICES

#### **DISCLOSURE / ELIGIBILITY:**

Students who request services or accommodations must disclose the nature of their disabling condition and provide documentation of disability to the campus Disability Support Services (DSS) counselor. Student accommodations at the high school do not automatically transfer to MCC. This disclosure is considered confidential, and is released to other MCC employees with the consent of the student on a “need to know” basis. There are limits to the confidentiality of student records as outlined in the College’s “Student Rights (Buckley/FERPA Amendment)” document.

#### **REQUEST FOR ACCOMMODATIONS / ADEQUATE NOTICE:**

Since some accommodations require more time to coordinate, students are asked to request services as soon as they register for classes and to register as early as possible. Delivery timelines for specific accommodations are available. Every effort is made to provide services, no matter when requested. Students should note that without sufficient written notice of request, timely provision of services may be delayed or denied.

At the time of request, the student and DSS Counselor will discuss the disability and services requested. Documentation will be requested and evaluated to ensure the appropriateness of the accommodations.

#### **DOCUMENTATION OF DISABILITY:**

Documentation may be hand delivered to the DSS Counselor by the student or requested via a consent form by the DSS Counselor. Current (within the past 3 years) documentation is preferred, and may be required by the DSS Counselor.

Documentation should describe the disability, how it may impact the student’s academic performance, and suggest appropriate educational accommodations. The diagnostician must be a qualified professional with credentials that qualify her/him to diagnose the disability and suggest appropriate accommodations.

#### **TEMPORARY ACCOMMODATIONS:**

Temporary accommodations may be provided during the time it takes to acquire appropriate documentation of disability. These temporary accommodations may be discontinued if supporting documentation is not received within 90 days.

**\*If you need accommodations while attending MCC, you must contact a DSS Counselor. DSS Counselors are available at four of MCC’s campuses. Accommodations do not transfer from high schools to MCC.**

Sarpy Center	Fort Omaha Campus	South Omaha Campus	Elkhorn Valley/ATC/Fremont Campus
	Building 23	Connector Building	
Office: 531-622-3841	Office: 531-622-2580	Office: 531-622-6260	Office: 531-622-1416

Home Page: <http://www.mccneb.edu/dss>

#### **Nondiscrimination and Equal Opportunity Statement**

Metropolitan Community College affirms a policy of equal education, employment opportunities and nondiscrimination in providing services to the public. To read our full discrimination policy statement visit [mccneb.edu/nondiscrimination](http://mccneb.edu/nondiscrimination).

Intentionally left blank

## 2024-2025 Career Academy Programs

3-D Animation and Games.....	9
Administrative Technology.....	11
Advanced Manufacturing.....	13
Architecture Technology.....	15
Automotive Collision Technology.....	17
Automotive Technology.....	19
Business.....	21
Certified Nursing Assistant (CNA).....	25
Civil Engineering.....	27
Construction Technology.....	29
Criminal Justice.....	31
Culinary Arts Foundations.....	33
Data Science.....	35
Diesel Technology.....	37
Digital Cinema and Filmmaking.....	39
Early Childhood Education – Seniors only.....	41
Electrical Technology.....	43
Emergency Medical Responder (EMR).....	45
Fire Science Technology.....	47
Heating, Air Conditioning, and Refrigeration Technology.....	51
Horticulture, Land Systems and Management.....	53
Human Services.....	55
IT Technician – Cyber Security.....	57
Photography.....	61
Powersports and Outdoor Power Equipment Technician.....	63
Pre-Apprenticeship Plumbing.....	65
Prototype Design.....	67
Web and Mobile App Development.....	69
Welding and Fabrication Technology.....	71

Intentionally left blank



### 3-D Animation and Games

Online

Students create models, characters, and imaginative spaces that are the foundation of 3D in games, real-time simulations, and the film industry. These skills also apply to marketing, web design, architecture, and social media.

#### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	DIMA 1620	Introduction to 3-D Modeling & Animation	4.5	Online	
	DIMA 1600	Introduction to the Game Industry	4.5	Online	
<b>December, 2024 – February, 2025</b>					
	DIMA 2625	3-D Modeling for Animation & Games	4.5	Online	
	DIMA 1400	Game Design Fundamentals	4.5	Online	
<b>March – May, 2025</b>					
	DIMA 2640	3-D Lab	4.5	Online	
	DIMA 2700	3-D Games Development	4.5	Online	
<b>TOTAL CREDIT HOURS</b>			<b>27</b>		

#### COURSE DESCRIPTIONS

**DIMA 1400 - Game Design Fundamentals** - This course explores the practice and theory of interactive art. Students study the history of both analog and digital games and pursue the creative possibilities of interaction and play-based systems.

**DIMA 1600 - Introduction to the Game Industry** - This course surveys the video game industry from its beginnings to the present day. Students acquire an understanding of the evolution of games in our culture, as well as introductory knowledge of the wide variety of career options available in the video game industry through hands-on projects and learning.

**DIMA 1620 - Introduction to 3-D Modeling and Animation** - This course is an introduction to the production of motion picture graphics using 3-D modeling and animation software. Student's study and practice techniques of 3-D model execution and scene design with light and camera placement.

**DIMA 2625 - 3-D Modeling for Animation and Games** - This course builds on the topics presented in DIMA 1620 with further explorations of the techniques of modeling, material definition, and animation. It emphasizes the development of 3-D models with techniques that are particularly suitable for games.

**DIMA 2640 - 3-D Lab** - This course requires an animation or game project that offers students an opportunity to build upon and integrate existing technical skills, share ideas with students from diverse animation disciplines, and produce a more complex product.

**DIMA 2700 - 3-D Game Development** - This course is an introduction to the production of motion picture graphics using 3-D modeling and animation software. Techniques of 3-D model execution and scene design with light and camera placement are practiced and refined.

- All classes are fully Online, meaning there are no required meeting times
- There are live Online lectures and meetings, but these will be available afterwards as recorded videos
  - Live participation by the student is optional
- The instructor is available for individual mentorship and guidance throughout the week on a private class chat server that all students are a part of.

Intentionally left blank

**Administrative Technology**  
South Omaha Campus – 27<sup>th</sup> and Q St

If you like to use the computer for a variety of tasks and work well with others, the Administrative Technology Career Certificate may be for you. This program is designed for students wanting to enter employment in a variety of office and administrative support professions. This certificate provides students the core knowledge and skills needed to successfully perform the job duties in today's rapidly changing business world. Students will take the Microsoft Office Specialist (MOS) certification exams for Word, Excel, and PowerPoint.

**Year 1 Student 2024-2025- Students obtain the Administrative Technology Career Certificate**

Dates	Course	Title	Credits	Times	Days
September – November 2024					
	INFO 1001	Information Systems and Literacy	4.5	1:00 – 3:00	M, W
	INFO 1008	Business Office Communications	4.5	1:00 – 3:00	T, TH
	INFO 1013	Keyboard Skillbuilding	2.0	Online	
December, 2024 – February, 2025					
	INFO 1206	Microsoft Word	4.5	1:00 – 3:00	M, W
	INFO 1208	Microsoft PowerPoint	4.5	1:00 – 3:00	T, TH
March – May, 2025					
	INFO 1207	Microsoft Excel	4.5	1:00 – 3:00	M, W
	INFO 1010	Customer Service Skills	4.5	1:00 – 3:00	T, TH
TOTAL CREDIT HOURS			29		
Summer (optional)					
	INFO 1227	Technology Applications	4.5	Online	

**Students will need to take the INFO 1227 Technology Applications course to complete the Administrative Technology Career Certificate.**

**COURSE DESCRIPTIONS**

**INFO 1001- Information Systems and Literacy** - Students learn knowledge and skills required on basic computer concepts. Topics include hardware, software, Windows operating system and file management, networking and security, and Internet and library research. Students also learn basic skills in Microsoft Word, Excel and PowerPoint. The course is aligned with the IC3 Digital Literacy Certification.

**INFO 1008 Business Office Communications** - Students explore the use of technology and methods used for effective written and verbal communication in today's business environment. Students learn to compose and edit various types of business communications that include the proper usage of basic English grammar and punctuation rules to structure and organize their writing. Students also acquire technology skills using the Microsoft Office Outlook software to compose and send electronic mail and to maintain electronic calendars, task lists, and contact lists. Students learn the objectives for the Microsoft ® Office Specialist certification exam for Outlook.

**INFO 1010 – Customer Service Skills** - Students study the importance of customer service satisfaction and the functions of customer relations systems. Students also learn the soft skills needed to provide effective customer service and support in a variety of business environments.

## **Administrative Technology Continued**

**INFO 1013 – Keyboard Skillbuilding** - Students complete a course entry timing to determine current keyboarding skills. Students then use the alphabetic keyboard and numeric keyboard to complete practice exercises to improve keyboarding speed and accuracy and complete variety of timed writings to evaluate improvement of keyboarding skills during the course. **NOTE:** Students must have prior keyboarding experience. Recommended speed for enrollment and optimal success is 30 wpm.

**INFO 1206 – Microsoft Word** - Students learn the features of Microsoft Word to create, design, and produce professional documents. In this course students will take the Microsoft Office Specialist certification exam for Word (Microsoft 365) Apps): Exam MO-110.

**INFO 1207 – Microsoft Excel** - Students learn the features of Microsoft Excel to create, design, and produce professional spreadsheets. In the course students will take the Microsoft Office Specialist certification exam for Excel (Microsoft 365) Apps): Exam MO-210.

**INFO 1208 – Microsoft PowerPoint** - Students learn the features of Microsoft PowerPoint to create, design, and produce professional presentations. In this course students will take the Microsoft Office Specialist certification exam for PowerPoint (Microsoft 365) Apps): Exam MO-310.

**INFO 1227 – Technology Applications** - Students utilize modern technology tools to learn and apply practices for effective management of information. Students also gain an overview of ethics in technology, government regulations, and advances in information security.

## Advanced Manufacturing

South Omaha Campus – 27<sup>th</sup> & Q St – Center for Advanced Manufacturing (CAM)

This program is a fast-paced, highly technical environment that provides hands-on skill development in **Welding, Precision Machine, Electrical, Motors, and Robotics** to offer students a competitive edge in today's workforce. Upon successful completion of this career academy, students will have employable skills local industry need. Students will have the opportunity to earn industry certifications from OSHA, NIMS, MSSC, and FANUC. This academy is for someone that has not decided on a specific trade area as the knowledge and skills learned will be useful in a broad spectrum of manufacturing occupations.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	MFGT 1010	Safety Topics for Manufacturing	4.5	12:30 – 3:00 M, W	
	MFGT 1000	Introduction to Power and Process	4.5	12:30 – 3:00 T, TH	
<b>December, 2024 – February, 2025</b>					
	PRMA 1400	Precision Machine Safety and Principles	4	12:30 – 3:00 M, W	
	WELD 1262	Welding QuickStart	3	12:30 – 3:30 T, TH	
<b>March - May, 2025</b>					
	PRMA 1401	Precision Machine Tool I	6	12:30 – 3:00 M-W	
	PRMA 1050	Print Reading	3	12:30 – 3:00 TH	
<b>TOTAL CREDIT HOURS</b>			<b>25</b>		

### Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024)

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	MFGT 1250	Basic Electricity	6	12:30 – 3:00 M, T, W, TH	
<b>December, 2024 – February, 2025</b>					
	DRAF 1050	AutoCAD for Fabrication	4.5	12:30 – 3:30 M, W	
	ELME 1210	Introduction to Motors	4.5	12:30 – 3:30 T, TH	
<b>March – May, 2025</b>					
	AMGF 2050	Problem-Solving	3	12:30 – 3:30 M	
	AMGF 2100	Introduction to Industrial Robotics	4	12:30 – 3:30 T, W, TH	
<b>TOTAL CREDIT HOURS</b>			<b>22</b>		
<b>TOTAL CREDIT HOURS AFTER 2 YEARS</b>			<b>47</b>		

### Course Descriptions

**MFGT 1000 - Introduction to Power and Process** - This course introduces students to various equipment and components found in the process and power operations industry. Topics include preventive and predictive maintenance, safety, lubrication, precision measuring devices, compressors, pumps, valves, steam systems, heat exchangers, cooling systems, and process instrumentation.

**MFGT 1010 - Safety Topics for Manufacturing** - Students learn how safety topics apply to manufacturing, process and power industries. During this course students have the ability to earn the OSHA 10 hour Industrial Safety credential.

**PRMA 1050 - Print Reading** - Students develop skills required for visualizing and interpreting industrial prints and freehand technical sketching. Topics include identifying prints, drafting and print-reading procedures, machining specifications, geometric dimensioning, and tolerancing.

## **Advanced Manufacturing Continued**

**PRMA 1400 - Precision Machine Safety and Principles** - Students learn machine safety, metrology and metallurgy along with basic machine principles related to hole making bench work and layout.

**WELD 1262 - Welding QuickStart** - This course gives students a quick start into a welding career by preparing them to pass the type of welding test given by many employers. Students learn the fundamentals of oxy-acetylene cutting, gas metal arc welding, and air carbon arc cutting. It also explores print reading for welders.

**PRMA 1401 - Precision Machine Tool I** - This course introduces machines, tools, and processes associated with the machine trade. It covers fundamentals in bench layout, metal removal processes, drill presses, and horizontal and vertical saws. This course also covers the use of all precision measuring tools.

NOTE: Completion of PRMA 1401 with a grade of C or better is required to advance to the next level class.

## Architecture Technology

Fort Omaha Campus – 30th and Fort St – Construction Education Center

This program combines architectural knowledge and computer-aided design drawing skills to prepare students for careers as professional architectural design technicians in the offices of architects, engineers, contractors and materials suppliers and more. Students learn the art and language of architecture, the design process, how methods and materials shape buildings, the relationship between structural types, space usage and how architecture reflects the culture for which it is built.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November 2024</b>					
	ARCH 1005	AEC Industry	6	1:00 – 3:00	T,W,TH
<b>December, 2024 – February, 2025</b>					
	CNST 1020	Blueprint Reading (1 <sup>st</sup> five weeks)	4.5	1:00 – 3:00	M-TH
	CNST 1030	Digital Blueprint Applications (2 <sup>nd</sup> five weeks)	4.5	1:00 – 3:00	M-TH
<b>March 2024– May, 2025</b>					
	ARCH 1105	Revit Fundamentals (1 <sup>st</sup> five weeks)	4.5	1:00 – 3:00	M-TH
	ARCH 1250	Revit Project Management (2 <sup>nd</sup> five weeks)	4.5	1:00 – 3:00	M-TH
<b>TOTAL CREDIT HOURS</b>			<b>24</b>		

### COURSE DESCRIPTIONS

**ARCH 1005 - AEC Industry** - Students learn aspects of the AEC (Architecture, Engineering and Construction) industry including the roles of professionals involved in the building design process. The tools and phases of design, construction documents, contracts, as well as codes and regulations are explored. Students gain an understanding of the dynamic nature of contemporary building design. Students participate in on-site visits to AEC industry companies and construction sites.

**CNST 1020- Blueprint Reading** – Students learn how to read and interpret residential architectural plans, including terms and definitions, architectural drawings, alphabet of lines, description of lines, and floor plans along with electrical, plumbing, section, and mechanical symbols. The course emphasized reading an architect's scale. It also includes extracting specified information from a set of building specifications and simple sketching procedures.

**CNST 1030 – Digital Blueprint Applications** – *Prerequisite (1) CNST 1020 must be completed prior to taking this course.* Student develop skills needed to interpret plans, both on paper and digitally, for commercial construction. Students obtain print reading experience with elements commonly included on prints for large commercial structures including site work, mechanical, plumbing, electrical, mechanical systems, structural steel, reinforced concrete, and finish construction.

**ARCH 1105 – Revit Fundamentals** - Students gain an introduction to Revit as a BIM (Building Information Modeling) tool while providing an overview of operation and terminology for building documentation. Students will have an opportunity to engage with the software through lectures, discussions, and hands-on assignments. Fundamental skills acquired in this course establish a foundation for future learning using Revit software.

**ARCH 1250 – Revit Project Management** - *Prerequisite (1) ARCH 1250 must be completed prior to taking this course.* Students learn fundamental skills for managing Revit projects to optimize organization, coordination and workflow within a multi-discipline design team. Previous experience with Revit is leveraged to gain functional knowledge of topics including templates, work sharing, annotation styles, complex scheduling, and advanced content creation.

Intentionally left blank



## Automotive Collision Technology

### South Omaha Campus – 27<sup>th</sup> and Q St

This program provides students with the skills and knowledge necessary for an entry level position in the automotive collision industry. Students will spend the majority of class in the lab where they learn to straighten, repair, and refinish automotive panels in accordance with factory specifications using hand and power tools. Welding, vehicle disassembly and reassembly is stressed with an emphasis on reading and writing repair estimates.

#### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	AUTB 1200	Non Structural Repair I	6	12:30 – 4:30	M, W
<b>December, 2024 – January, 2025 – 1<sup>st</sup> 5 weeks</b>					
	AUTB 1040	Auto Collision Repair Welding	3	12:30 – 4:30	M, W
<b>January – February, 2025 – 2<sup>nd</sup> 5 weeks</b>					
	AUTB 2450	Collision Estimating I	3	12:30 – 4:30	M, W
<b>March – April, 2025 – 1<sup>st</sup> 5 weeks</b>					
	AUTB 2300	Automotive Refinishing I	3	12:30 – 4:30	M, W
<b>April – May, 2025 – 2<sup>nd</sup> 5 weeks</b>					
	AUTB 1100	Structural Repair I	3	12:30 – 4:30	M, W
<b>TOTAL CREDIT HOURS</b>			<b>18</b>		

#### Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024)

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	AUTB 1210	Non Structural Repair II	6	12:30 – 4:30	T, TH
<b>December, 2024 – February, 2025</b>					
	AUTB 2310	Automotive Refinishing II	6	12:30 – 4:30	T, TH
<b>March – May, 2025</b>					
	AUTB 1220	Non Structural Repair III	6	12:30 – 4:30	T, TH
<b>TOTAL CREDIT HOURS</b>			<b>18</b>		
<b>TOTAL CREDIT HOURS AFTER 2 YEARS</b>			<b>36</b>		

**Supplies:** Safety glasses and program shirt(s) will be required. Information about where to purchase will be discussed at orientation or the first day of class. Fall quarter has a \$30 lab fee.

#### COURSE DESCRIPTIONS

**AUTB 1040 – Auto Collision Repair Welding** - Students learn techniques of welding for automotive applications. Students study and practice the theory and use of metal inert gas (MIG) welding, plasma-cutting, and resistance welding in the repair of high-strength steel structural and nonstructural body components. In addition, this course provides practice in advanced automotive welding skills, including various types of position welds.

**AUTB 1100 – Structural Repair I** - Students learn to analyze various types of vehicle damage, interpret dimension specification sheets, and select and set up various types of measuring systems used for damage analysis.

## Automotive Collision Continued

**AUTB 1200 – Non Structural Repair I** - This course provides the fundamentals of shop safety, tool application, damage repair preparation, metal straightening techniques, and the use of body fillers in the repair of collision-damaged vehicles. Students learn how to disassemble and reassemble bolt on vehicle parts.

**AUTB 1210 – Non Structural Repair II** - *Prerequisite: AUTB 1200.* This course continues to build skills acquired in the basic course. Students learn the techniques of door skin replacement, plastic repairs, and how to work with trim and hardware. This class includes adhesive and nitrogen welding repairs of plastic substrates.

**AUTB 1220 – Non Structural Repair III** - *Prerequisite: AUTB 1210.* This course focuses on welded panel replacement and determining the necessary repairs. The complete job is stressed, from body repair to automotive primer applications.

**AUTB 2300 – Automotive Refinishing I** - Students are introduced to EPA, personal health, and safety equipment regulations. It covers introductions to finish systems, metal prep, sealers, primers, and masking techniques.

**AUTB 2310 – Automotive Refinishing II** - *Prerequisite: AUTB 2300.* This course is a continuation of Automotive Refinishing I with emphasis placed on solving paint application problems. Students practice paint mixing, matching and application, finish defects, and causes and cures.

**AUTB 2450 - Collision Estimating I** - Students learn the systematic approach to analyzing collision damage and creating a damage report. It covers different types of damage, plan for repairs, repair or replace decisions, and use of crash guides.

**Automotive Technology**  
South Omaha Campus – 27<sup>th</sup> & Q St

This program provides students with the skills and knowledge necessary for entry-level positions in the automotive field. This program helps students develop skills in diagnosing and repairing common entry level items, while developing a career path focusing on personal growth. The program presents the fundamentals of automotive systems and emphasizes human relations and critical thinking skills for entry-level technicians.

**Year 1 Student 2024-2025**

Dates	Course	Title	Credits	Times	Days
<b>September – December 2024</b>					
	AUTT 1110	Automotive 1: Fundamentals	12	12:45 – 3:00	M-TH
<b>January – May 2025</b>					
	AUTT 1120	Automotive 2: Introduction to Maintenance	12	12:45 – 3:00	M-TH
<b>TOTAL CREDIT HOURS</b>			<b>24</b>		

**Additional Supplies and Fees:**

ASE student certification testing fee will be assessed when the student enrolls in the AUTT 1112 fall quarter class (Fee for 2022-2023 year was \$46.00.) Supplies required: Safety glasses, program t-shirt, steel toed shoes or boots must be worn in lab. No shorts. MCC will provide, on loan, most of the appropriate supplies and tools for each course. Students will be held responsible for lost and/or broken equipment and tools.

Automotive Youth Educational Systems (AYES): AYES is a partnership among participating automotive manufacturers, dealerships and select automotive programs. It is designed to encourage young people to consider careers in retail automotive service. Visit <https://www.ayes.org/Home.aspx> for more information.

**Review**

- ✓ Driver's License Required
- ✓ All classes use a blended format - in class and online
- ✓ Good attendance required.
- ✓ Students must maintain a 3.0 GPA in the automotive classes and a 2.0 GPA in their high school to be in the AYES program. Students that do not meet this requirement may remain in the program provided they are passing all classes, but they will lose the AYES status.
- ✓ Students with traffic violations, DUI, drug arrest, speeding ticket, and loss of driver's license may find employment difficult.

**COURSE DESCRIPTIONS**

**AUTT 1110 – Automotive I: Fundamentals** - Students learn many of the basic elements of the auto repair trade including safety, chemicals, basic tool use, tire repair, oil change, TPMS systems, and introduction to electrical repair. Soft skills, such as attitude, ethics, professionalism, and on-the-job communication are encouraged. Students practice entry level skills by working in teams, using online resources, participating in class, and individualized hands-on lab training utilizing program vehicles. Before moving on to the next skill set, students must be proficient in the previous tasks. At the end of this course, students will demonstrate an individual mastery of designated skills using modern industry standard equipment.

**AUTT 1121 – Automotive II: Introduction to Maintenance** - Students gain knowledge and skills in engine operations, transmissions, drivetrains including basic ignition systems, hydraulic principles, and vehicle maintenance. In addition, students perform brake rotor and drum resurfacing, identify and repair brake system components utilizing a variety of automotive testing equipment.

Intentionally left blank

**Business**  
Sarpy Center – 91<sup>st</sup> & Giles

The MCC Business Academy courses path to the Business Specialist Career Certificate and align closely with the Business Transfer Associate in Arts Degree and the Business Administration Associate in Applied Science Degree. These high-transfer and in-demand college courses and programs prepare students to continue their studies at MCC or transfer to four-year educational institutions.

**Year 1 Student 2024-2025**

<b>Dates</b>	<b>Course</b>	<b>Title</b>	<b>Credits</b>	<b>Times</b>	<b>Days</b>
<b>September – November, 2024</b>					
	MRKT 1010	Principles in Marketing	4.5	1:00 – 3:00	M
	BSAD 1000	Introduction to Business	4.5	1:00 – 3:00	W
<b>December, 2024 – February, 2025</b>					
	ECON 1100	Microeconomics	4.5	1:00 – 3:00	M
	BSAD 1100	Business Law I	4.5	1:00 – 3:00	W
<b>March - May, 2025</b>					
	MGMT 2100	Principles of Management	4.5	1:00 – 3:00	M
	ENTR 1050	Introduction to Entrepreneurship	4.5	1:00 – 3:00	W
<b>TOTAL CREDIT HOURS</b>			<b>27</b>		

**Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024)**

<b>Dates</b>	<b>Course</b>	<b>Title</b>	<b>Credits</b>	<b>Times</b>	<b>Days</b>
<b>September – November, 2024</b>					
	ACCT 1100	Accounting I	4.5	1:00 – 3:00	M
	ECON 1000	Macroeconomics	4.5	1:00 – 3:00	W
<b>December, 2024 – February, 2025</b>					
	ACCT 1110	Accounting II	4.5	1:00 – 3:00	M
	MRKT 2720	Global Marketing	4.5	1:00 – 3:00	W
<b>March – May, 2025</b>					
	ACCT 1120	Accounting III	4.5	1:00 – 3:00	M
	BSAD 2700	Global Business	4.5	1:00 – 3:00	W
<b>TOTAL CREDIT HOURS</b>			<b>27</b>		
<b>TOTAL CREDIT HOURS AFTER 2 YEARS</b>			<b>54</b>		

**All courses are taught in a Hybrid format; these courses combine classroom learning with a significant online component.**

**COURSE DESCRIPTIONS**

**MRKT 1010 - Principles of Marketing** - Students learn core concepts and common practices specific to marketing including distributive fields, their functions and interrelationships. Topics include concept and strategies of the marketing mix; the application of marketing concepts in both consumer and business to business environments; and controversial marketing topics, including ethical challenges of advertising.

**BSAD 1000 - Introduction to Business** - Students learn core concepts and common practices in the business environment. Practical learning experiences examine the challenges and opportunities in today's business organizations. Students develop a portfolio in the exploration of business careers and academic planning. Topics include business ownership, ethics and social responsibility, entrepreneurship, marketing, management, human resources, legal and regulatory environment, economics, global business, operations, accounting, and finance.

## Business Transfer Continued

**ECON 1100 - Microeconomics** - Students examine the theory and application of the four market structures; pure competition, monopolistic competition, oligopoly, and monopoly. Students determine the revenue, costs, output, and prices for each market structure along with the social implications of each market form. In addition, the students analyze various social issues such as consumer choice, pollution, health care, public works projects, and poverty transfer programs using the microeconomic principles of elasticity, benefit and cost, and diminishing returns analysis.

**BSAD 1100 - Business Law I** - Students learn ordinary legal aspects of business transactions involving such topics as legal rights and duties, law of contracts, employment law, basic business organizations, and law of property. Students gain a general understanding of and develop basic legal logic in business situations through the use of legal principles, cases, and information useful in determining the need for professional counsel.

**MGMT 2100 - Principles of Management** - Students learn key concepts, common practices, and theories of management in the organizational environment. Practical learning experiences reflect a traditional approach to management using the leading, planning, organizing, and controlling approach. Topics include decision-making practices, organizational structure, employee motivation, group dynamics, efficiency of control mechanisms, and ethical issues in the workplace.

**ENTR 1050 – Introduction to Entrepreneurship** - Students evaluate the business skills and commitment necessary to successfully operate an entrepreneurial venture and review the challenges and rewards of entrepreneurship. Students understand the role of entrepreneurial business in the United States and the impact on national and global economy. Students prepare a realistic foundational business plan appropriate to the launch of a small business.

**ACCT 1100 - Accounting I** - Students learn the fundamental principles of accounting in this course, the first of three accounting courses covering principles of accounting. Students explore financial topics through real-world illustrations reflecting current business practices. Topics include the basic accounting cycle, recording transactions and posting to ledger accounts, adjusting and closing processes, inventory, internal control, and financial reporting.

**ECON 1000 - Macroeconomics** - Students study the “big ideas” of macroeconomics such as GDP, inflation, unemployment, labor, and international trade. A look at public-policy decision making using macro theories such as: monetary policy, fiscal policy and other economic-stabilization theories, and the advantages and drawbacks of using them to address the economic challenges facing our economy is also examined by the students.

**ACCT 1110 - Accounting II** - The second of three accounting courses covering principles of accounting. Students explore financial topics through real-world illustrations reflecting current business practices. Topics include short- and long-term assets, current liabilities, bonds payable, components of stockholders’ equity, financial statement analysis, the corporate income statement, and statement of cash flows.

**MRKT 2720 - Global Marketing** - Students engage in an advanced study of international marketing and global markets. Students review and expand their knowledge of basic marketing practices and theory as related to global markets. Emphasis is on international market research, international marketing strategies, designing and implementing global marketing programs, entry strategies, globalization, glocalization, global context of marketing mix decisions, foreign regulations, and product adaptation for foreign markets. Students are exposed to the role of management in international marketing in home and host countries as well as the role of international organizations and free trade agreements.

**ACCT 1120 - Accounting III** - The third of three accounting courses covering principles of accounting. Students explore financial topics through real-world illustrations reflecting current business practices. Topics include an introduction to managerial accounting, job order costing, activity-based costing, cost-volume-profit analysis, budgeting, and investment analysis.

## **Business Transfer Continued**

**BSAD 2700 - Global Business** - Students learn the fundamentals of global business including the globalization of economic, political, legal and cultural systems. Students experience a broad overview of global market systems, global finance and exchange rates calculations. Topics include entry strategies, supply chain dynamics, cultural assimilation and accommodation, and international business plan logistics.

Intentionally Left Blank



## Certified Nursing Assistant (CNA)

South Omaha Campus – 27<sup>th</sup> & Q – Mahoney Building and Fort Omaha Campus – 30<sup>th</sup> and Fort St

A certified nursing assistant is considered part of the interdisciplinary health care team and assists the registered nurse or practical nurse with providing nursing care to patients. Responsibilities include basic nursing tasks related to meeting physical needs and activities of daily living.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	HIMS 1120	Medical Terminology I	4.5	1:00–2:45	M *hybrid
	HMRL 1010	Human Relations Skills	4.5	1:00–2:45	T, TH
<b>December, 2024 – February, 2025</b>					
	HIMS 1130	Medical Terminology II	4.5	1:00–2:45	M *hybrid
<b>December, 2024 – First 3 weeks</b>					
	EMSP 1000	Cardiopulmonary Resuscitation*	1	1:00–4:00	F
<b>January, 2025 – 2<sup>nd</sup> 7 weeks</b>					
	EMSP 1012	Community Emergency Response Team*	2	1:00–4:00	F
<b>March – May, 2025 – Fort Omaha Campus</b>					
	HLTH 1200	Long Term Care / Certified Nursing Assistant	6.5	1:00-3:00	M-TH
<b>May TBD</b>					
	HLTH 1200	Clinicals (must attend all days) <i>Times for clinicals are subject to change</i>		<b><u>6:00-2:30</u></b>	M, W, TH
<b>May TBD</b>					
	State Testing			TBA	TBA
<b>TOTAL CREDIT HOURS</b>			<b>23</b>		

\* **Attendance in all sessions of EMSP 1000 and EMSP 1012 are mandatory to continue in the program.**

\* **Hybrid format; these courses combine classroom learning with a significant online component.**

### Application Process and Fees:

- Career Academy CNA Application/Technical Standards form signed and submitted.
- Background Check form signed and submitted by both student and parent if under 19.
- Provide proof, COVID-19 vaccination, Mantoux PPD Skin Test (TB -Tuberculosis Test) that will remain current through the end of the spring quarter classes.
- SSN or I-94 required for State Registry
- Student Liability Insurance Program\*\* fee will be assessed when the student enrolls in the spring quarter class HLTH 1200 CNA Long Term Care / Certified Nursing Assistant. (Fee for 2023-2024 year was \$14.50.)
- Background Check fee will be assessed when the student enrolls in the spring quarter class. Background check completion is necessary prior to starting HLTH 1200. (Fee for 2023-2024 year was \$45.00.)

*\*\*Students enrolling in certain health occupations and human services programs requiring clinical practice, laboratory or experiences that place the student in the position of providing patient care must be covered by a student liability insurance program. The specific policy shall be determined by the College with the cost paid by the student as part of the fee assessment upon initial enrollment in the clinical, laboratory or patient care class.*

**COURSE DESCRIPTIONS**

**EMSP 1000 – Cardiopulmonary Resuscitation for Healthcare Providers** - This course will teach the participant how to recognize and respond to life-threatening emergencies, such as cardiac arrest, respiratory arrest, and foreign-body airway obstruction (choking). The student will learn to recognize heart attack and stroke symptoms in adults and breathing difficulty in children. This course teaches the skills needed to respond to emergencies identified. The participant will learn the skills of CPR for victims of all ages (including ventilation with barrier devices and bag-mask devices), use of an automated external defibrillator (AED), and relief of foreign-body airway obstruction (FBAO).

**EMSP 1010 – Heartsaver First Aid with CPR and AED** - This course teaches rescuers to effectively identify and treat adult emergencies in the critical first minutes of injury or illness until emergency medical service personnel arrive. The course provides basic training solutions for first aid, adult CPR, and automated external defibrillator.

**HIMS 1120 – Medical Terminology I** - Students gain a solid foundation of medical terminology through the introduction of prefixes, suffixes, word roots, abbreviations, terms, and symbols. It emphasizes understanding the medical vocabulary as it applies to the anatomy, physiology, pathology, diagnostic procedures, and therapeutic procedures of the human body. Students participate in an in-depth study of medical terms, including correct spelling and pronunciation, in order to be prepared to enter their professions in the healthcare field.

**HIMS 1130 – Medical Terminology II** - *Prerequisite: HIMS 1120 with C or better.* Students utilize the principles of medical word building to develop an extensive medical vocabulary used in healthcare occupations. This advanced course presents detailed anatomy and physiology, specialty medical areas, clinical procedures, laboratory tests, medical terms, and abbreviations. Students study practical applications with case reports, operative and diagnostic tests, and laboratory and x-ray reports. The course also emphasizes correct spelling and pronunciation. Students will be able to comprehend medical records, communicate among medical professionals, and have a high-level overview of medical terms.

**HLTH 1200 – Long Term Care/Certified Nursing Assistant** - The course meets the Nebraska Health and Human Services System training requirements for nursing assistant certification and employment in long-term care facilities. The course combines classroom lecture, laboratory application, and clinical experience for development of basic skills needed to care for the elderly. Course content focuses on teaching nursing assistants to provide safe, effective, and caring services to the elderly or chronically ill patients of any age in a long-term care facility. Upon enrollment: Background Check and Student Liability Insurance Program fee is assessed to the student's account.

- State statute requires that all students be present for 76 hours of instruction to successfully complete this course. No student can miss more than 2 consecutive hours of any class period unless exception is made by the Dean. If a class is less than 2 hours, consecutive starts at the beginning of the following class meeting. No more than a cumulative total of 5 hours of class or lab time may be missed.

**HMRL 1010 – Human Relations Skills** - This is an introductory course in interpersonal skills, stressing the importance of utilizing those skills in the workplace. Students are presented with opportunities to become more effective, discerning, ethical, flexible, perceptive, and understanding in both professional and personal endeavors. Special attention is given to appropriate communication skills, multinational and diversity awareness, teamwork, and job-seeking skills as applied to an increasingly customer-oriented workplace.

## Civil Engineering Technology

Fort Omaha Campus – 30th and Fort St – Construction Education Center

The Civil Engineering Technology program prepares students for employment in the civil engineering field as civil engineering technicians. Civil engineering technology is one of the broadest fields in engineering because it is involved with many facets of our infrastructure, including roads, bridges, utilities, buildings and water treatment facilities.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November 2024</b>					
	SCET 1120	AutoCAD Essentials	9	1:00 – 3:00	M-W*
<b>December, 2024 – February, 2025</b>					
	SCET 1150	AutoCAD Civil 3-D Fundamentals	9	1:00 – 3:00	M-W*
<b>March – May, 2025</b>					
	SCET 1000	Civil Engineering Fundamentals (First five weeks)	4.5	1:00 – 3:00	M-W*
	SCET 2410	Civil Site Design (Second five weeks)	4.5	1:00 – 3:00	M-W*
	<b>TOTAL CREDIT HOURS</b>		<b>27</b>		

*\* Hybrid format; these courses combine classroom learning with a significant online component.  
T/W on-campus, M/W Asynchronous.*

**Students must pass each course with a C or better to continue.**

### COURSE DESCRIPTIONS

**SCET 1120 - AutoCAD Essentials** - Students learn 2-D computer-aided drawing techniques using AutoCAD software, including AutoCAD user interface, basic drawing and editing tools, organizing drawing objects in layers, text creation and editing, dimensioning, plotting and file management. Students also learn model space and layout, annotation with text, use of blocks, attributes and xrefs.

**SCET 1150 – AutoCAD Civil 3-D Fundamentals** - *Prerequisite (1) SCET 1120 must be completed prior to taking this course.* Students learn to operate AutoCAD Civil 3D software. Students focus on tools applied specifically for civil engineers, including creating site plan, utility and roadway design, profiles, and section sheets.

**SCET 1000 – Civil Engineering Fundamentals** - Students learn an introduction to basic tools necessary for success as a Civil Engineer. Included are such topics as the history of civil engineering, professional ethics, the business practice of engineering, leadership, sustainability, emerging technologies, a discussion of the various disciplines within the field of Civil Engineering, and concepts of design and professional communication.

**SCET 2410 – Civil Site Design** - *Prerequisite (1) SCET 1000 must be completed prior to taking this course.* Students gain logical and practical design criteria for civil site project design, including site grading and earthwork, hydrologic analysis, hydraulic systems, and storm water management.

Intentionally left blank

## Construction Technology

Fort Omaha Campus – 30th and Fort St – Construction Education Center

Students partake in classroom and practical application exercises, which supply them with knowledge and skills in the construction management area. A 10-hour OSHA construction safety certification is included.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November 2024</b>					
	CNST 1005	Introduction to Construction Industry	4.5	1:00 – 3:00	M, W
	CNST 1050	Introduction to Carpentry	4.5	1:00 – 3:00	T, TH
<b>December, 2024 – February, 2025</b>					
	CNST 1370	Exterior Finish	6.5	1:00 – 3:00	M-TH
<b>March – May, 2025</b>					
	CNST 1240	Interior Finish & Cabinetry	9	1:00 – 3:00	M-TH
<b>TOTAL CREDIT HOURS</b>			<b>24.5</b>		

### Summer (optional but recommended)

CNST 1020	Blueprint Reading	4.5	TBD
-----------	-------------------	-----	-----

**\*\*CNST 1020 required for completion of Construction Career Certificate (CCRSB)**

### Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024)

Dates	Course	Title	Credits	Times	Days
<b>September – November 2024</b>					
	CNST 1360	Floor, Wall, Stair & Ceiling Framing	9	1:00 – 3:00	M-TH
<b>December, 2024 – February, 2025</b>					
	CNST 2360	Roof Framing	6.5	1:00 – 3:00	M-TH
	EMSP 1010	Heartsaver First Aid with CPR and AED (First five weeks)	1	12:30 – 3:10	F
	CNST 1110	Construction Safety (Next five weeks)	1	1:00 – 3:00	F
<b>March – May, 2025</b>					
	CNST 1400	Introduction to Masonry	6.5	1:00 – 3:00	M-TH
<b>TOTAL CREDIT HOURS</b>			<b>24</b>		

### Summer 2025 (optional but recommended)

CNST 2435	Capstone Completion	6.5
-----------	---------------------	-----

**\*\*CNST 2435 required for completion of Construction Career Certificate (CCRSB)**

### COURSE DESCRIPTIONS

**CNST 1005 – Introduction to Construction Industry** - This course will introduce students to the methods and material used in the construction industry. The course also covers construction efficiency and safety in the delivery, handling, and installation of building materials. It covers information on building materials, products, systems, and procedures.

## Construction Technology Continued

**CNST 1050 – Introduction to Carpentry** - This course covers the safe use of hand and power tools. Students practice the proper set up of tools and the manufacture of jigs and templates. They take part in a lab project involving all stationary and hand power tools, as well as carpentry hand tools. This course is a must for practitioners who want their tools to perform as designed.

**CNST 1110 – Construction Safety** - This course provides training outlined by the Occupational Safety and Health Administration (OSHA). This course supplies students with the recommended safety requirements for working in the construction field.

**CNST 1370 – Exterior Finish** - This course includes terms and definitions used in the construction field pertaining to exterior finish. It covers theory and practical application of various types of wall covering, roof covering, exterior doors, windows, and trim and emphasizes estimation of labor and materials in all areas. Students install exterior siding, roofing, windows, doors, and roofing materials on a house in the indoor lab.

**CNST 1240 – Interior Finish and Cabinetry** - This course presents interior finish terms and definitions that are used in the construction field. It covers theory and practical application of various types of wall and ceiling finish, interior door hanging, and various applications of interior trim and cabinets. The course emphasizes estimation of labor and materials in all areas.

**EMSP 1010 – Heartsaver First Aid with CPR and AED** - This course teaches rescuers to effectively identify and treat adult emergencies in the critical first minutes of injury or illness until emergency medical service personnel arrive. The course provides basic training solutions for first aid, adult CPR, and automated external defibrillator.

**CNST 1360 – Floor, Wall, Stair & Ceiling Framing** - Students learn the fundamentals of floor framing, wall parts, wall construction, stair parts, stair construction and installation of ceiling posts. Students construct a full-scale house in the indoor learning lab.

**CNST 2360 – Roof Framing** - This course covers the principles, calculations, and cutting of all components of gable, hip, and valley rafters. Students frame an actual roof on a house in the indoor lab.

**CNST 1400 - Introduction to Masonry** - This course emphasizes brick and block construction. Students mix mortar and use the trowel, spread mortar, cut brick and concrete blocks, and level and plumb laid-up units. It includes dry bonding techniques and various brick-block patterns.

### **\*\* Required for completion of Construction Career Certificate (CCRSD)**

**CNST 1020 – Blueprint Reading** - Students learn how to read and interpret residential architectural plans, including terms and definitions, architectural drawings, alphabet of lines, description of lines, and floor plan, electrical, plumbing, section, and mechanical symbols. The course emphasizes reading an architect's scale. It also includes extracting specified information from a set of building specifications and simple sketching procedures.

**CNST 2435 – Capstone Completion** - Students use their construction and critical thinking skills to deliver a completed capstone house to the community. Students participate in several phases of construction during this course. Students complete the actual punch-list for the capstone house. Items on this list include construction work in framing, siding, roofing, drywall, interior trim work, interior, and finish materials.

## Criminal Justice

Sarpy Center – 91<sup>st</sup> & Giles

Criminal Justice is the study of crime and the criminal justice system, including law enforcement, courts, and corrections. Criminal Justice uses scientific perspectives and methodologies to examine crime and society's response to crime in the United States and around the world. These government entities work to maintain control in the public arena, prevent and manage crime, authorize punishment for criminal activities, and offer rehabilitation.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	CRIM 1010	Introduction to Criminal Justice	4.5	1:00-3:00	M, W
	CRIM 2300	Community Relations	4.5	1:00-3:00	T, TH
<b>December, 2024 – February, 2025</b>					
	CRIM 2030	Police and Society	4.5	1:00-3:00	M, W
	CRIM 1030	Courts and the Judicial Process	4.5	1:00-3:00	T, TH
<b>March – May, 2025</b>					
	CRIM 1020	Introduction to Corrections	4.5	1:00-3:00	M, W
	CRIM 2120	Community Based Corrections	4.5	1:00-3:00	T, TH
<b>TOTAL CREDIT HOURS</b>			<b>27</b>		

### COURSE DESCRIPTIONS

**CRIM 1010 – Introduction to Criminal Justice** - This course is an overview of the history, development, and philosophies of crime control within a democratic society. It examines the criminal justice system with emphasis on the police, the prosecution and the defense, the courts and the correctional agencies.

**CRIM 1020 – Introduction to Corrections** - This course outlines corrections as a systematic process, showing the evolving changes within institutional and community-based corrections. Topics include the history of corrections, the influence of social thought and philosophy on the development of corrections, the rights of the incarcerated inmate, and the duties of the correctional officer.

**CRIM 1030 – Courts and the Judicial Process** - This course examines legal aspects of investigation and arrest procedures as well as rules governing the admissibility of evidence in court. It focuses primarily on police and correctional due process, application of the law, and civil liability concerns. Topics include search and seizure, arrest and interrogation, revocation, probation and parole, probable cause, and other timely issues.

**CRIM 2030 – Police and Society** - Prerequisite: *CRIM 1010*. This course examines the role of the police in relationship to the duties of law enforcement and their policing in a diverse society. Specific topics include key demographic trends related to the growth of multicultural communities. Also covered are key issues associated with immigration and how those issues affect law enforcement in their everyday job.

**CRIM 2120 – Community-Based Corrections** - This course outlines a number of community-based corrections programs such as probation, parole, electronic monitoring, and fines designed to meet the level of risk and needs of the offender. The course covers the balanced approach that reflects a strong emphasis on practical and legal matters. It also discusses the historical, philosophical, social, and legal contexts of community-based corrections.

**CRIM 2300 – Community Relations** - Prerequisite: *CRIM 1010*. This course examines the traditional and current problems that inhibit understanding among all segments of the criminal justice system and the public. It explores methods of creating understanding and confidence by using various means of communication.

Intentionally left blank



## Culinary Arts Foundations

Fort Omaha Campus – 30th and Fort St – Institute for the Culinary Arts

Students who successfully complete all courses are eligible to receive a Career Certificate in Basic Gastronomy from the Institute for Culinary Arts.

### 1 Year Academy 2024-2025

Dates	Course	Title	Credits	Times	Days
July 25	Student and Parent Night Institute for the Culinary Arts, Building 22			7:00 – 9:00 P	Thursday
September – November 2024					
	CULI 1130	Industry Essentials	1.5	12:30 – 2:20 M 12:30 – 3:30 T Lab	
	CULI 1110	Culinary Methods	2	2:30 – 4:45 M 12:30 – 3:30 WTH Lab	
December, 2024 – February, 2025					
	MATH 1242	Applied Math for Hospitality	4.5	12:30 – 2:30 MT	
	CULI 1220	Baking I	4	2:35 – 3:30 T 12:30 – 3:30 WTH Lab	
March – May, 2025					
	HUMS 1160	Humanities and Food Culture	4.5	12:30 – 3:30 M* & W	
	CULI 1230	Nutrition and Wellness	4.5	12:30 – 3:30 T* & TH	
	*Hybrid lecture format with some online content required				
TOTAL CREDIT HOURS			25		

### COURSE DESCRIPTIONS

**CULI 1130 - Industry Essentials** - Students learn about the CULI curriculum, ICA building, MCC, and procedures and methods of the ICA, along with sanitation practices, masters of the craft, and the history of the hospitality industry. They identify and discuss contemporary issues in food service, and actively practice good habits that are essential to safe and successful completion of all programs in CULI, and that are necessary to demonstrate in industry. In addition, students practice palate development and food quality evaluation.

**CULI 1110 - Culinary Methods I** - Students implement foundational working skills expected in a professional kitchen. This learning is achieved through discussion and operation of various kitchen equipment and facility processes. Students establish a safe working environment. Students investigate various cooking methods to generate and evaluate food.

**MATH 1242 - Applied Math for the Hospitality Industry** - This course covers the development and application of the mathematical skills needed to understand the financial concepts and solve problems related to the hospitality industry. Topics include basic math principles, conversions, yields, recipe costing, recipe conversions, selling prices, baking formulas, checking accounts and services, payroll, and payroll taxes.

**CULI 1220 - Baking I** - Students learn safe and sustainable bakeshop skills and fundamental baking methods to produce a variety of goods. Students demonstrate proper sanitation methods and use, clean, and store bakeshop equipment and smallwares according to health code regulations and program standard operating procedures.

**CULI 1230 - Nutrition and Wellness** - Students actively explore the dynamic relationship between food and personal well-being, by learning foods, nutrients, physical activities, preparation, and cookery methods that support health and balance in the studied areas of wellness. Students design and build a plan for their own wellness and practice the skills needed to activate that plan.

## Culinary Arts Foundations Continued

**HUMS 1160 - Humanities and Food Culture** - Students explore the historical and contemporary Humanities and Food Culture from various regions around the world. Humanist expression through the fine arts, storytelling, religion, and the performing arts reflects the uniqueness of a culture, in the same way that food culture is distinct. The two components of the classroom will engage both cultural expressions. In lecture, students will be introduced to a sample of the humanities of a chosen cultural region. Lab work will compliment that exploration with a study of the cuisine of each respective region.

**Books Needed:** Books are subject to change, dependent upon the course criteria and without prior notice.

Please go to Follett Bookstore's web site at [www.efollett.com](http://www.efollett.com) start typing in Metropolitan Community College. Most books for the Culinary Arts Foundations Career Academy will only be available at MCC's Fort Omaha Campus Bookstore.

**Tools & Equipment:** A knife kit is required. Cost is approximately \$300. Uniforms and tools are available through the bookstore at MCC's Fort Omaha Campus. A specific list of what is required will be sent to each member of the Career Academy. A kitchen scale is required, standard 11 pound / ounce / gram scale. Amazon link below.

[Taylor-Glass-Top-Kitchen-Scale](#)

Additional tools and equipment are supplied by MCC in each lab. ***Students are financially responsible for lost or broken tools and equipment.***

**Dress Code:** The Culinary Arts Foundation Career Academy requires students to provide and maintain their own uniform. Uniforms are available at MCC's Fort Omaha Campus bookstore and cost about \$75 each. It is recommended that students have more than one uniform so they may participate in each lab class in a clean uniform.

**Data Science**  
Fort Omaha Campus –30th and Fort St

The Data Science Career Certificate is a level I certificate and is designed for the student who wishes to develop a working knowledge of gathering, managing, interpreting and storytelling with data in our modern world. As large collections of complex data become more commonly leveraged as a driving force in business decision-making, careers in data science, reporting and analytics are in demand! This certificate prepares students for entry level work in data analytics and reporting.

**Year 1 Student 2024-2025**

Dates	Course	Title	Credits	Times	Days
September 2024 – November 2025					
	INFO 1003	Problem Solving and Programming Logic	4.5	1:00 – 3:00	MW
	INFO 1620	Introduction to Database Design	4.5	1:00 – 3:00	TTH
December, 2024 – February, 2025					
	INFO 2630	Structured Query Language SQL	4.5	1:00 – 3:00	MW
	INFO 2648	Programming for Data Analytics	4.5	1:00 – 3:00	TTH
March – May, 2025					
	INFO 2646	Introduction to Data Science	4.5	1:00 – 3:00	MW
	INFO 2647	Data Visualization	4.5	1:00 – 3:00	TTH
TOTAL CREDIT HOURS			27		
Summer (optional)					
	MATH 1410	Statistics	4.5	Online	

**\*\*To earn Data Science Career Certificate student needs to complete MATH 1410 Statistics.**

**COURSE DESCRIPTIONS**

**INFO 1003 – Problem Solving and Programming Logic** - Students are introduced to the Python programming language. Emphasis is placed on proper design and coding in the IDLE design environment. Topics include data-types, variables, flow of control, text file input-output, arrays and other data structures, number-based classes, strings, and security concepts.

**INFO 1620 -Intro to Database Design** - This course is an introduction to database design, implementation, and management. It covers the basics of database design and manipulation. Topics include relationships, database normalization, constraints, data modeling, multi-user database architectures, and exploration of various DBMS software products. Students learn how to design and manipulate the database in order to maintain and present data that is accurate, meaningful, and supportive to a business environment. NOTE: Students must receive a C or better in this course to enroll in a capstone course.

**INFO 2630 – Structured Query Language** - Students gain the skills needed to access and manipulate data in a relational database management system. The course covers basic- through advanced-level SQL commands and explores various DBMS SQL environments.

**INFO 2646 – Introduction to Data Science** - This course provides an overview of data science, covering the broad array of fundamental challenges in and methodologies for working with big data. Students will be introduced to the scientific programming environment, as well as the key theoretical concepts of both programming and statistical analysis. Specifically, this introductory course is designed to be integrative across core areas of data science, including statistics, data mining, machine learning, and data visualization. Students will acquire a working knowledge of data science through hands-on projects in a variety of business, engineering, social sciences or life sciences domains.

## Data Science Continued

**INFO 2647 – Data Visualization** - This course provides hands-on experience with current visualization tools and techniques, allowing the student to build confidence while tackling common challenges and obstacles in working with large data sets and develop best practice approaches for storytelling with data. Additionally, this course is designed to provide interdisciplinary opportunities for working with data sets relevant to a students' area of study, allowing for greater application of developing skills for employable opportunities within the business community.

**INFO 2648 – Programming for Data Analytics** - Students gain hands-on experience gathering, cleaning, and manipulating data to provide insights into real-world datasets. Current programming languages and libraries active in the industry of data science will be used such that students will gain experience in working with data from a raw data set stage through to pattern identification and visualization creation. Specifically, this course builds on concepts introduced in pre-requisite courses to provide this end-to-end view of working with data in an industry appropriate language.

**MATH 1410 – Statistics** - Students will develop a critical and functional understanding of data. Topics include frequency distributions; measures of central tendency and dispersion; probability and probability distributions; sampling concepts; estimating means, variances, standard deviations; proportions and percentages; hypothesis testing; and correlation and linear regression. Software and calculators will be used as appropriate throughout the course.

## Diesel Technology

Applied Technology Center – 10407 State St, Omaha

The Diesel Technology program prepares students for a career in the growing diesel technology field. Using the latest equipment and technologies, the curriculum is built upon a foundation that includes the fundamentals of compression ignited internal combustion engines and their variations, shop safety, shop operations, brakes, drive trains, suspension, steering, electrical/electronic systems and heat/air conditioning.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
July 8 – 18, 2024 *dates subject to change					
	DESL 0900	Basics of Diesel Mechanics	1.5	9:00a-12:00p	M-F
July 18, 2024	Parent Night			6:00-8:00p	TH
September – November, 2024					
	DESL 1000	Introduction to Diesel Technology	4	1:00-4:25	M, W
December, 2024 – February, 2025					
	DESL 1230	Diesel Engine Fundamentals	4	1:00-4:25	M, W
March – May, 2025					
	DESL 1200	Fundamentals of Hydraulics	4	1:00-4:25	M, W
TOTAL CREDIT HOURS			13.5		
Summer (optional)					
	DESL 2100	Heavy Duty Drivetrain	4.0	TBD	

**\*\*DESL 2100 required for completion of Diesel Technology Career Certificate**

### Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024)

Dates	Course	Course Title	Credits	Times	Days
<b>September – November, 2024</b>					
	DESL 1210	Electricity and Electronics	6	1:00-5:45	T, TH
<b>December, 2024 – February, 2025</b>					
	DESL 2150	Truck ABS and Brakes	4	1:00-4:25	T, TH
<b>March – May, 2025</b>					
	DESL 2200	Steering and Suspension	4	1:00-4:25	T, TH
	<b>TOTAL CREDIT HOURS</b>		<b>14</b>		
	<b>TOTAL CREDIT HOURS AFTER 2 YEARS</b>		<b>27.5</b>		

**1. First Year students are required to attend and pass the DESL 0900 summer session for screening into the fall program.**

**2. Attendance is required.**

**3. Shirt(s) will be required. Information on where to purchase shirts will be given to students during 1<sup>st</sup> week of fall quarter. Cost approximately \$15.**

**Required Books: \*Books are subject to change, dependent upon the course criteria and without prior notice.**

All classes listed above need: CDX Medium/Heavy Duty Diesel System Textbook & Engine Textbook Bundle + 2yr. Online Access code. Bundle is used for ALL MCC Diesel courses.

ISBN Kit # 9781284152975 (Complete Kit available at our MCC bookstore only). **2022 cost \$708 + tax.**

## Diesel Technology Continued

### COURSE DESCRIPTIONS

**DESL 0900 – Basics of Diesel Mechanics** - This class provides the student with an overview of the profession of diesel mechanics. In addition, it gives the beginning student hands-on experience with tasks designed to enhance mechanical ability, as well as the opportunity to explore the broad areas of a career in diesel technology.

**DESL 1000 – Introduction to Diesel Technology** - Students develop a basic understanding of the diesel technology including preventive maintenance, shop processes, tool usage, safety, and career opportunities. Students also identify and explain basic functions of components including the engine, driveline, HVAC system, and accessories.

**DESL 1200 – Fundamentals of Hydraulics** - This course is the study of basic principles relating to hydraulic systems and component identification. Activities involving schematic usage and symbol identification enhance students' diagnostic skills.

**DESL 1210 – Electricity and Electronics** - *Prerequisite: DESL 1000 Diesel Preventive Maintenance and earn a "C" or better* **Note:** *Students should qualify by proper testing to enter at minimum Math 1240 before registering for DESL 1210.* This course presents electrical principles and basic introductory electronics used in the Diesel Technology career field for service of medium duty truck, heavy duty truck, heavy equipment, and power generation applications. Theory, operation and testing of common systems will be investigated with MCC hands-on trainers and live work.

**DESL 1230 – Diesel Engine Fundamentals** - *Prerequisite DESL 1000 Diesel Preventive Maintenance and earn a "C" or better.* This course is the study of diesel engine principles and component identification. Students gain knowledge through lecture and entry-level hands-on engine assembly and disassembly.

**DESL 2150 – Truck ABS and Brakes** - *Prerequisites (2): DESL 1000 Diesel Preventive Maintenance & DESL 1200 Fundamentals of Hydraulics and earn a "C" or better; or it may be taken with Instructor Permission in conjunction with either one or both of these 2 courses as a co-requisite.* This course with professional lab presentations studies, analyzes, and repairs ABS systems on both medium- and heavy-duty trucks. Students learn to repair, rebuild, and maintain air brake systems through lab experiences in wheel-end repair and maintenance.

**DESL 2200 – Steering and Suspension** - *Prerequisites (2): DESL 1000 Diesel Preventive Maintenance & DESL 1200 Fundamentals of Hydraulics and earn a "C" or better; or it may, with Instructor Permission, be taken in conjunction with either one or both of these 2 courses as a co-requisite.* This course is a study of heavy-duty truck steering and suspension systems. Students learn to repair, align, and maintain these systems.

**RECOMMENDED for Career Certificate DDES1: not part of the academy\***

**\*DESL 2100 – Heavy Duty Drive Train** - This course is the study of medium- and heavy-duty truck clutches, transmissions, drivelines, and differentials. Focus is on operation, repair, and maintenance of these systems.

## Digital Cinema and Filmmaking

Elkhorn Valley Campus – 204<sup>th</sup> & Dodge St

This program teaches students the production process for television, film, commercial and other media production. Students learn to use professional moving image cameras in the field and the studio. Students learn how to record quality professional audio in the field and studio. Students learn how to write scripts for feature films, commercials and cooperate industrial media. Students also learn how to edit and manipulate visual and sound media using industry standard professional tools and software.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	PHOT 1500	Moving Image Lab	6	1:00 - 2:30	M, T, W, TH
<b>December, 2024 – February, 2025</b>					
	VACA 1130	Video I - Studio	4.5	1:00 - 4:00	M, W
	VACA 1110	Introduction to Scriptwriting	4.5	1:00 - 3:05	T, TH
<b>March – May, 2025</b>					
	VACA 2250	Art in Film	4.5	1:00 - 3:00	M, W
	VACA 2130	Video II – Field	4.5	1:00 – 4:00	T, TH
<b>TOTAL CREDIT HOURS</b>			<b>24</b>		

### COURSE DESCRIPTIONS

**PHOT 1500 – Moving Image Lab** - This course is an overview of methods used in moving image production. By investigating the pre-production, production and post-production processes, students achieve an understanding of how these principles integrate with still photography, video production, and multimedia.

**VACA 1110 – Introduction to Scriptwriting** - This course introduces scriptwriting for video production, television, and motion picture film. Using the two-column and screenplay formats, students complete lab exercises and assignments about the structure of concept, treatment, and finished script. It reviews broadcast or corporate examples. Students can use the scripts for projects in Moving Image Lab, Video II, and Video III.

**VACA 1130 – Video I – Studio** - This course is an introduction to the video medium. Students learn and practice the basics of operating a video camera, recording quality images and sound, and editing tape. Both studio and location assignments provide practical learning opportunities. NOTE: PHOT 1500 is required for Video majors only.

**VACA 2130 – Video II – Field** - Camera operation, sound recording, and editing assignments provide an intermediate skill level of learning and practice. It introduces and applies lighting for the studio and on location.

**VACA 2900 – Art in Film** - *Prerequisite: PHOT 1500.* This course examines film as an art form, emphasizing the connection between form and content. Students will gain a greater understanding of the visual language of cinema by studying the conscious aesthetic choices made by the filmmakers to convey the story and/or meaning. Students view and discuss a variety of films from various genres, including noir, screwball comedy and documentary. The course also covers important movements in cinema such as French New Wave and Italian Neo-realism, examining both stylistic traits as well as historical importance. Beyond covering and analyzing the components of filmmaking, this course delves into basic concepts of film theory.

Intentionally left blank



## Early Childhood Education – Seniors Only

24<sup>th</sup> and Franklin, Learning Center

The Early Childhood Education program strives to prepare student for the early childhood workforce. The program is designed to continuously improve practices and methodology in preparing effective, dedicated and competent early childhood educators.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	ECED 1150	Introduction to Early Childhood Education	4.5	12:30-2:00	T, TH
	ECED 1110	Infant/Toddler Development	4.5	12:30-2:00	M, W
<b>December, 2024– February, 2025</b>					
	ECED 1120	Preschool Child Development	4.5	12:30-2:00	M, W
	ECED 1050	Expressive Arts	4.5	12:30-2:00	T, TH
<b>March – May, 2025</b>					
	ECED 1060	Observation, Assessment/Guidance	4.5	12:30-2:00	M, W
	ECED 1260	Children’s Health & Nutrition	4.5	12:30-2:00	T, TH
<b>TOTAL CREDIT HOURS</b>			<b>27</b>		

**\*Observation outside of class time will be required for all ECED courses.**

#### **Additional Fees:**

State licensing requires a background check fee to be assessed when taking Early Childhood Education courses. Background check fee is estimated at \$45.00.

Students participating in the Early Childhood Education Academy will be required to:

1. Participate in field observations
2. Provide own transportation
3. Actively participate in all class activities
4. Have knowledge of basic computer skills
5. Complete all writing assignments using APA formatting
6. Participate in classroom presentations
7. Use PowerPoint and other digital platforms
8. Adhere to deadlines

#### **COURSE DESCRIPTIONS**

**ECED 1050 – Expressive Arts** - Students study the theories and strategies for supporting creative thinking in young children. Students learn to integrate children's creativity, play, and the arts into their curriculum in a way that fosters learning and development and meets accountability measures. Numerous strategies will be learned to differentiate instruction for making adaptations for diverse learners. Students learn to assess and evaluate children's play, games, and inventions. They plan and prepare developmentally appropriate activities in the different developmental domains of learning and development. Students understand and reflect on the teacher's role in supporting children's creative expression, play, assessing the creative process, and products. Students will explore working with diverse families and communities. Reflect and discuss the effective design and use of environments, materials, and resources.

## Early Childhood Education Continued

**ECED 1060 – Observation, Assessment and Guidance** - Students learn how to observe, record, and interpret the development of children ages three through five by utilizing different types of observation tools to document each aspect of development. Students observe and record what young children are like and how to support them in their early development with hands-on activities. Students gain knowledge and skills for observing in the early childhood education environment, key issues, and new research. Students will learn through observing the progression of children's skill development in six primary areas of emotional, social, physical, cognitive, language, and creative. Students focus on child development versus child behaviors, preparing students to become avid observers, recording what they see objectively, learning how to interpret/analyze the data. Students will become adept at using the observations to plan for young individuals in different types of early childhood programs.

**ECED 1110 – Infant/Toddler Development** - Students gain knowledge and understanding of infant and toddler development from birth to 36 months. Young children with and without special needs will be studied. Students focus on developmentally appropriate curriculum and program planning and guidance using a relationship-based model for infants and toddlers. Students learn the importance of families' and teachers' relationships and responsiveness interactions with young children. Students study the importance of diverse cultures and populations and their impact on quality programming for infants and toddlers. Students explore the most recent research and trends in development and adult interactions with young children.

**ECED 1120 – Preschool Child Development** - Students create self-directed learning environments in their own and future classroom. Students learn how to set up different learning centers (e.g., music/dance), including detailed instructions on what to include in the center and how children can use it. Learning activities and strategies will be learned, which can be integrated into appropriate centers. The students gain knowledge and understanding about the self-directed learning approach that encourages children to become deeply involved in their learning. Students learn the importance of the teacher's role as facilitator and intentional teacher of learning.

**ECED 1150 – Introduction to Early Childhood Education** - Students gain an in-depth introduction to early childhood education and care for young children birth to age 8. In this course, students learn the foundation of early childhood education from history to current issues in the field. Responsive relationships in early childhood programming will be examined. Developmentally Appropriate practices will be introduced with teaching the understanding of theories of learning and development and their application in the classroom. Students learn the foundations of intentional teaching and how to plan curriculum for diverse groups of children. Through planning, students develop guidance strategies and how to create a developmentally appropriate environment for young children. Standardized testing, assessment, and diverse learners will be explored.

**ECED 1260 – Children's Health and Nutrition** - Students focus on practical, comprehensive practices that help them understand interrelationships among nutrition, health, and safety. Students take the information learned and share their knowledge with children and their families. Reflective practices will be used that promote thinking about professional situations that students will face in their own classrooms and teaching situations. Student focus on wellness strategies that prepares them to teach diverse populations in a variety of early childhood settings.

## Electrical Technology

Fort Omaha Campus – 30th and Fort St – Construction Education Center

The Electrical Technology program provides education and training for students who are seeking a career in the electrical field. Students entering into this program will study electrical systems in residential wiring, commercial wiring and industrial motor controls.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	ELTR 1200	Basic Electricity	8	1:00 – 3:00	M, T, W, TH
<b>December, 2024 – February, 2025</b>					
	ELTR 1210	Residential Wiring	9	1:00-3:00	M, T, W, TH
<b>March – May, 2025</b>					
	ELTR 1220	Commercial Wiring I	9	1:00-3:00	M, T, W, TH
<b>TOTAL CREDIT HOURS</b>			<b>26</b>		

### Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024)

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	ELTR 2250	Commercial Wiring II	6	1:00-3:35	M, W
<b>December, 2023 – January, 2025</b>					
	ELTR 1250	Electric Equipment Controls	6	1:00-3:35	M, W
	EMSP 1010	Heartsaver First Aid with CPR and AED (First three weeks)	1	12:30 – 3:10	F
	CNST 1110	Construction Safety (Next four weeks)	1	1:00 – 3:00	F
<b>March – May, 2025</b>					
	ELTR 2331	Electric Services & Transformers	6	1:00-3:35	M, W
<b>TOTAL CREDIT HOURS</b>			<b>20</b>		
<b>TOTAL CREDIT HOURS AFTER 2 YEARS</b>			<b>46</b>		

**Tools and Supplies:** Students must purchase tool pouch, wire strippers, lineman's pliers, 4 in 1 screwdriver, multi-meter (recommended Ideal #61-744), calculator, safety glasses and colored pencil set with green, yellow, red, black, blue, violet and brown. Safety glasses and closed toe shoes must be worn in lab. MCC will provide, on loan, most of the appropriate supplies and tools for each course. Students will be held responsible for lost and/or broken equipment and tools.

### COURSE DESCRIPTIONS

**CNST 1110 – Construction Safety** - This course provides training outlined by the Occupational Safety and Health Administration (OSHA). This course supplies students with the recommended safety requirements for working in the construction field.

**ELTR 1200 – Basic Electricity** - This course includes an introduction to electrical theory and series and parallel circuits. Topics include alternating current, Ohm's Law, meters, grounding, preview of the National Electric Code, troubleshooting, and repair. NOTE: Completion of ELTR 1200 with a grade of C or better is required to advance to next level class.

## Electrical Technology Continued

**ELTR 1210 – Residential Wiring** - *Prerequisite: ELTR 1200 with grade of C or better.* This course is designed to give students a basic knowledge of the electrical circuitry found in residential wiring. Students learn to apply the National Electrical Code standards.

**ELTR 1220 – Commercial Wiring** - *Prerequisite: ELTR 1210 with grade of C or better.* This course includes the study of branch circuits, wiring methods, and application of the National Electrical Code. Following the requirements of the National Electrical Code, students learn how to select the proper type and size of boxes, raceways, and conductors. Students also learn how to calculate box fill, conduit fill, and conduit bending.

**ELTR 2250 – Commercial Wiring II** - This course is a continuance of Commercial Wiring I. Students will focus on advanced devices, installation of equipment installations, and trouble shooting and repairs. Further understanding of calculations for equipment and the National Electrical Code will be included.

**ELTR 1250 Electrical Equipment Controls** - Students learn the electric controls for general motor controllers, such as, time clock lighting controls, AC and DC controls, and heat pumps among others. Students learn the allowable ampacities for various circuits and the NEC code regulations that define each. Troubleshooting procedures are explained and practiced.

**ELTR 2331 Electric Services and Transformers** - *Prerequisite (1) ELTR 1220 with grade of C or better - must be completed prior to taking this course.* This course explains electric service, system transformers, and the principles of grounding and bonding electrical systems.

**EMSP 1010 – Heartsaver First Aid with CPR and AED** - This course teaches rescuers to effectively identify and treat adult emergencies in the critical first minutes of injury or illness until emergency medical service personnel arrive. The course provides basic training solutions for first aid, adult CPR, and automated external defibrillator.

## Emergency Medical Responder (EMR) – Seniors Only

South Omaha Campus – 27<sup>th</sup> & Q St – Mahoney Building

The Metropolitan Community College Emergency Medical Responder program is designed to instruct students to the level of Emergency Medical Responder, who serve as a vital link in the chain of a health care team. EMRs have also been referred to as first responders, as they may arrive first to a medical situation and have to quickly assess the patient and determine life-saving treatments or assist other Emergency Medical Service professionals such as EMTs, paramedics or doctors. This curriculum includes skills necessary for the individual to provide emergency medical care with a limited amount of equipment. Successful completion of the program will allow the student to sit for the certifying exam.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	HIMS 1120	Medical Terminology I	4.5	1:00–2:45	T * hybrid
<b>September, 2024 – 1<sup>st</sup> 5 weeks</b>					
	EMSP 1012	Community Emergency Response Team*	2	1:00–4:00	F
<b>October, 2024 – 2<sup>nd</sup> 5 weeks</b>					
	EMSP 1000	Cardiopulmonary Resuscitation*	1	1:00–4:00	F
<b>December, 2024 – February, 2025</b>					
	HIMS 1130	Medical Terminology II	4.5	1:00–2:45	T * hybrid
	HMRL 1010	Human Relations Skills	4.5	1:00–3:00	M, W
<b>March – May, 2025</b>					
	EMSP 1020	EMR – Emergency Medical Responder	5.5	1:00–3:00	M-TH
<b>TOTAL CREDIT HOURS</b>			<b>22</b>		

\* **Attendance in all sessions of EMSP 1000 and EMSP 1012 are mandatory to continue in the program.**

\* **Hybrid format; these courses combine classroom learning with a significant online component.**

### Application Process and Fees:

- EMR Application/Technical Standards form signed and submitted
- Background Check form signed and submitted by both student and parent if under 19.
- Provide proof of all immunizations, including COVID-19, Hepatitis B and Mantoux PPD Skin Test (TB - Tuberculosis Test) that will remain current through the end of the spring quarter classes. SSN required for State Registry
- Driver's License or government ID
- Student Liability Insurance Program\*\* fee will be assessed when the student enrolls in the spring quarter class EMSP 1020 (Fee for 2023-2024 year was \$14.50.)
- Background Check fee will be assessed when the student enrolls in the spring quarter class is necessary prior to starting EMSP 1020 (Fee for 2023-2024 year was \$45.00.)
- Drug Testing will be assessed when the student enrolls in the spring quarter class is necessary prior to starting EMSP 1020 (Fee for 2023-2024 year was \$50)
- Tools and Supplies: stethoscope, uniform (polo, pants, black shoes), pen and notepad, watch with second hand will be required in the Spring Quarter.

*\*\*Students enrolling in certain health occupations and human services programs requiring clinical practice, laboratory or experiences that place the student in the position of providing patient care must be covered by a student liability insurance program. The specific policy shall be determined by the College with the cost paid by the student as part of the fee assessment upon initial enrollment in the clinical, laboratory or patient care class.*

### **COURSE DESCRIPTIONS**

**EMSP 1000 – Cardiopulmonary Resuscitation for Healthcare Providers** - This course will teach the participant how to recognize and respond to life-threatening emergencies, such as cardiac arrest, respiratory arrest, and foreign-body airway obstruction (choking). The student will learn to recognize heart attack and stroke symptoms in adults and breathing difficulty in children. This course teaches the skills needed to respond to emergencies identified. The participant will learn the skills of CPR for victims of all ages (including ventilation with barrier devices and bag-mask devices), use of an automated external defibrillator (AED), and relief of foreign-body airway obstruction (FBAO).

**EMSP 1012 – Community Emergency Response Team - (CERT)** This program educates students about disaster preparedness for the hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. CERT offers a consistent, nationwide approach that professional responders can rely on during disaster situations. Through CERT the capabilities to prepare for, respond to and recover from disasters is built and enhanced.

**EMSP 1020 – Emergency Medical Responder** - This course is designed to instruct a student to the level of Emergency Medical Responder, who serves as a vital link in the chain of the health care team. This curriculum includes skills necessary for the individual to provide emergency medical care with a limited amount of equipment. Successful completion of the program will allow the student to sit for the certifying exam.

- Student cannot miss more than 16 hours during the duration of this course.

**HIMS 1120 – Medical Terminology I** - Students gain a solid foundation of medical terminology through the introduction of prefixes, suffixes, word roots, abbreviations, terms, and symbols. It emphasizes understanding the medical vocabulary as it applies to the anatomy, physiology, pathology, diagnostic procedures, and therapeutic procedures of the human body. Students participate in an in-depth study of medical terms, including correct spelling and pronunciation, in order to be prepared to enter their professions in the healthcare field.

**HIMS 1130 – Medical Terminology II** - *Prerequisite: HIMS 1120 with C or better*

Students utilize the principles of medical word building to develop an extensive medical vocabulary used in healthcare occupations. This advanced course presents detailed anatomy and physiology, specialty medical areas, clinical procedures, laboratory tests, medical terms, and abbreviations. Students study practical applications with case reports, operative and diagnostic tests, and laboratory and x-ray reports. The course also emphasizes correct spelling and pronunciation. Students will be able to comprehend medical records, communicate among medical professionals, and have a high-level overview of medical terms.

**HMRL 1010 – Human Relations Skills** - This is an introductory course in interpersonal skills, stressing the importance of utilizing those skills in the workplace. Students are presented with opportunities to become more effective, discerning, ethical, flexible, perceptive, and understanding in both professional and personal endeavors. Special attention is given to appropriate communication skills, multinational and diversity awareness, teamwork, and job-seeking skills as applied to an increasingly customer-oriented workplace.

## Fire Science Technology

Applied Technology Campus – 10407 State Street, Omaha, Nebraska

The Fire Science Technology program at Metropolitan Community College focuses on the studies that will provide the successful graduate with the knowledge and tools to perform as a firefighter as effectively as possible.

### Year 1 Student 2024 - 2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	FIST 1000	Principles of Emergency Services	3	12:30-3:00	TU
	FIST 2020	Fire Prevention, Inspection & Codes	4	12:30-3:00	WE
<b>December, 2024 – February, 2025</b>					
	FIST 1060	Occupational Safety & Health for Emergency Services	3	12:30-3:00	TU
	FIST 2040	Principles of Fire & Emergency Services Safety & Survival	4	12:30-3:00	WE
<b>March– May, 2025</b>					
	FIST 1070	Fire Protection Systems	3	12:30-3:00	TU
	FIST 2060	Strategy & Tactics	3	12:30-3:00	WE
<b>TOTAL CREDIT HOURS</b>			<b>20</b>		

### Year 2 Student 2024 – 2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	FIST 2000	Incident Command System	3	12:30-3:00	TU
	FIST 2030	Legal Aspects of Emergency Services	3	12:30-3:00	WE
<b>December, 2024 – February, 2025</b>					
	FIST 1050	Building Construction for Fire Protection	3	12:30-3:00	TU
	FIST 2010	Fire Investigation I	3	12:30-3:00	WE
<b>March – May, 2025</b>					
	FIST 2050	Introduction to Fire & Emergency Services Administration	3	12:30-3:00	TU
	FIST 2011	Fire Investigation II	3	12:30-3:00	WE
<b>TOTAL CREDIT HOURS</b>			<b>18</b>		

### Application Process and Fees:

- Career Academy FIST Application/Technical Standards form signed and submitted. \$14.50 Insurance Fee applied each quarter.

**GRADUATION SUMMER – any senior who completes year one and is 18 by the start of the class will be guaranteed a spot in both FIST 1090 & 2070. Students completing both years are also guaranteed a spot in class the summer they graduate if they are 18 by the start of the class.**

FIST 1090**	Firefighter I	10
FIST 2070**	Hazardous Materials Operations	3.5

**\*\* must be 18 years or older by May in order to take FIST 1090 & 2070.**

### COURSE DESCRIPTIONS

**FIST 1000 – Principles of Emergency Services** This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; 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; and life safety initiatives. NOTE: Course formerly Introduction to Fire Protection Principles.

**FIST 1050 – Building Construction for Fire Protection** This course provides a basic understanding of how the construction type, alternative design, and materials influence a building's reaction to fire. This course provides recognition of relevant information about a building before a fire, as well as fire ground 'reading' of the building that provides the ability to assess building stability and resistance to fire and determine likely paths of fire extension. Students become familiar with the materials and types of construction used for the various parts of buildings in this class. This course covers building code requirements; steel, timber, and masonry construction; structures of the common form; lift-slab and tilt-up construction; and developments in the building construction field. This course teaches building construction as it relates to the firefighter and life safety.

**FIST 1060 – Occupational Safety and Health for Emergency Services** This course introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk and hazard evaluation and control procedures for emergency service organizations.

**FIST 1070 – 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 hazard fire suppression systems, water supply for fire protection, and portable fire extinguishers.

**FIST 2000 – Incident Command System** This course provides an introduction to the basic principles of the Incident Command System within the National Incident Management System (NIMS) compliant framework. The course covers the Department of Homeland Security Incident Command courses 100, 200, and 700. These are the minimum Federal ICS requirements for first responders within the United States. In addition to the course reading material and lecture, the course relies heavily on a final group activity and an understanding of inter-agency dynamics. Personnel accountability, safety at the scene, planning for the continuity of operations, and logistical requirements for incidents of all risks and sizes are only a few of the major components that are covered.

**FIST 2010 – Fire Investigation I** This course provides students 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. NOTE: Course formerly Incendiary Fire Analysis and Investigation.

**FIST 2011 – Fire Investigation II** This course is intended to provide the student with advanced technical knowledge on rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation, and testifying.

**FIST 2020 – Fire Prevention, Inspection and Codes** This course is an examination and evaluation of the techniques, procedures, programs, and agencies involved with fire prevention. It gives consideration to related governmental inspection and education procedures.

**Fist 2030 – Legal Aspects of Emergency Services** This course is an introductory course that addresses the federal, state, and local laws that regulate emergency services and includes a review of national standards, regulations, and consensus standards.



## Fire Science Continued

**FIST 2040 – Principles of Fire & Emergency Services Safety & Survival** This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services.

**FIST 2050 – Introduction to Fire and Emergency Services Administration** This course is designed for the entire fire service or the student that would like to enter the career field. FIST 2050 focuses heavily on the management and day to day operation of fire and emergency services departments. Hiring, promotion and disciplinary issues will be stressed as well as the management principles of effective leadership at all levels of the organization. This course is written to the National Fire Academy (NFA) FESHE curriculum.

**FIST 2060 – 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.

**FIST 1090 – Firefighter I** *Prerequisites: Medical screening compliant with NFPA 1582 Corequisites: FIST 2070*  
This course includes the information and skills to perform basic firefighting functions on the fire ground. Upon completion, students can take the Nebraska State Firefighter I Certification Test. This course prepares students to meet the requirements of Firefighter I per NFPA 1001 Standard for Firefighter Professional Qualifications and Hazardous Materials Awareness per NFPA 472 Standard for Responders to Hazardous Materials Incidents. **\*\*student must be 18 years or older**

Intentionally left blank

**Heating, Air Conditioning, and Refrigeration (HVACR)**  
Fort Omaha Campus – 30th and Fort St – Construction Education Center

The Heating, Air Conditioning and Refrigeration (HVACR) program covers all aspects of installing, troubleshooting and servicing heating, ventilating, air conditioning and refrigeration systems. This program combines class work with realistic hands-on lab experiences to prepare students for career opportunities as repair persons, business owners, wholesalers and in residential sales.

**Year 1 Student 2024-2025**

<b>Dates</b>	<b>Course</b>	<b>Title</b>	<b>Credits</b>	<b>Times</b>	<b>Days</b>
<b>September – November 2024</b>					
	HVAC 1101	HVACR Electrical Systems & Components	9.0	1:00 – 3:00	M-TH
<b>December, 2024 – February, 2025</b>					
	HVAC 1102	HVACR Shop Practices (1 <sup>st</sup> five Weeks)	4.5	1:00 – 3:00	M-TH
	HVAC 1104	Sheet Metal Fundamentals I (2 <sup>nd</sup> five weeks)	4.5	1:00 – 3:00	M-TH
<b>March – May, 2025</b>					
	HVAC 1103	Introduction to HVACR Principles & Theory	9.0	1:00 – 3:00	M-TH
<b>TOTAL CREDIT HOURS</b>			<b>27</b>		

**Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024)**

<b>Dates</b>	<b>Course</b>	<b>Title</b>	<b>Credits</b>	<b>Times</b>	<b>Days</b>
<b>September – November 2024</b>					
	HVAC 1201	Heating System Fundamentals (1 <sup>st</sup> five weeks)	4.5	1:00 – 3:00	M-TH
	HVAC 2101	Split Systems: Air Conditioning / Heat Pumps (2 <sup>nd</sup> five weeks)	4.5	1:00 – 3:00	M-TH
<b>December, 2024 – February, 2025</b>					
	HVAC 1202	Commercial Refrigeration Installation & Service (1 <sup>st</sup> five weeks)	4.5	1:00 – 3:00	M-TH
	HVAC 1203	Building Automation Fundamentals 1 (2 <sup>nd</sup> 5 weeks)	4.5	1:00 – 3:00	M-TH
<b>March – May, 2025</b>					
	HVAC 2301	Advanced Residential Air Conditioning (1 <sup>st</sup> 5 weeks)	4.5	1:00 – 3:00	M-TH
	HVAC 2401	Commercial HVAC Systems (2 <sup>nd</sup> 5 weeks)	4.5	1:00 – 3:00	M-TH
<b>TOTAL CREDIT HOURS</b>			<b>27</b>		
<b>TOTAL CREDIT HOURS AFTER 2 YEARS</b>			<b>54</b>		

**COURSE DESCRIPTIONS**

**HVAC 1101 - HVACR Electrical Systems and Components** - Students learn proper electrical vocabulary, safety, and test procedures through a combination of classroom and lab lectures and activities. Students also become familiar with basic circuit structures such as series, parallel, and combination circuits and their rules; in the process they also learn Ohm's and Watt's laws that govern the behavior of all electrical circuits.

## HVACR Technology Continued

**HVAC 1102- HVACR Shop Practices** - Students practice using tools in basic HVAC/R jobs such as tube bending, flaring, swaging, soldering, brazing, and making drain lines out of copper. Students learn to cut and thread gas pipe and how to fabricate drain lines in schedule 40 and 80 PVC, and vinyl tubing. Students learn and gain certification in trappipe. Students become acquainted with standard shop tools and equipment in order to meet or exceed industry standards.

**HVAC 1104 -Sheet Metal Fundamentals 1** - Students learn to identify and create basic fittings used in residential air conditioning and heating systems. Students also become familiar with typical hand tools, project layout and fabrication tasks, and safe operation of sheet metal machinery.

**HVAC 1103 - Introduction to HVACR Principles and Theory** - Students are provided experience in actual refrigeration service practice. Typical service problems are worked out by each student. The fundamentals of controls, definitions, measurements, electric controls, safety controls and refrigerant controls are included. This course covers the usage of EPA approved equipment to remove, recycle and reclaim refrigerant. Students take the EPA test with a Pass/Fail rate of 75% minimum.

**HVAC 1201 - Heating System Fundamentals** - Students study heating fundamentals and operations of gas and electric heating systems. Installation and service problems are investigated along with wiring, operating and safety controls, use of test instruments, venting, combustion air, gas piping and trouble-shooting. Efficiency tests are conducted in the lab with emphasis on safety.

**HVAC 2101 – Split Systems: Air Conditioning/Heat Pump** - Students learn about combination heating and cooling systems. Students study natural gas and electric heating systems and air conditioning systems. Humidification, electronic air cleaners and air filtering are also covered.

**HVAC 1202 - Commercial Refrigeration Installation and Service** - Students install a complete refrigeration system (low temperature/medium temperature) using hard drawn copper tubing. Various systems are studied and the student solves typical service problems. Refrigerant leaks are repaired, components replaced, systems evacuated and dehydrated, oil and refrigerant charge installed, and systems tested and adjusted.

**HVAC 1203 – Building Automation Fundamentals I** - Students study the basic components of a simple building automation system, controlling a small variable air volume air handling unit serving a variety of different Air terminal units, and how they interact. Students are introduced to the basics of block based programming related to commercial HVAC systems, how to properly install various field devices and their associated wiring, and how to analyze a system for proper installation.

**HVAC 2301 – Advanced Residential Air Conditioning** – Students calculate heating and cooling needs of various structures using manual and computerized calculator methods. The course covers equipment selection, static pressure, and airflow.

**HVAC 2401 – Commercial HVAC Systems** – Students learn about equipment used in the commercial HVAC field. The primary focus is on package rooftop unit installation, repair, and service. Students also study water source, geothermal heat pumps, and loop systems.

## Horticulture, Land Systems and Management

Fort Omaha Campus – 30<sup>th</sup> and Fort St – Building 29

This program establishes a hands-on learning environment which enhances workplace and interpersonal skills by promoting the knowledge of proper plant care and maintenance and the knowledge of plant structures and functions while meeting current industry needs and evaluation of environmental impact of choices made.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
July 25		Student and Parent Night Institute for the Culinary Arts building 22		7:00 – 9:00 P	Thursday
<b>September – November 2024</b>					
	HLSM 1001	Industry Exploration	3	1:00 – 3:00	TWTH
<b>December, 2024 – February 2025</b>					
	HLSM 1010	Horticulture Science	4.5	1:00 – 3:00	MTWTH
<b>March – May 2025</b>					
	HLSM 1012	Plant Physiology	4.5	1:00 – 3:00	MTWTH
<b>TOTAL CREDIT HOURS</b>			<b>12</b>		

### Year 2 Courses TBD (students who participate in 1<sup>st</sup> year in 2023-2024)

#### COURSE DESCRIPTIONS

**HLSM 1001 – Industry Exploration** – Students will distinguish different careers in the horticulture field, participate in activities related to those careers and plan their educational experience in the horticulture land systems management program (HLSM) at MCC.

**HLSM 1010 – Horticulture Science** - Students will become familiar with horticulture terminology that is associated with morphological structures of plants including roots, stems, leaves, flowers, fruits and seeds. Students will learn to distinguish characteristics as a means of identification.

**HLSM 1012 – Plant Physiology** - Students will expand upon the fundamental plant structure and processes information that was introduced in Intro to Horticulture. Students will study advanced plant morphology and physiology within the plant kingdom. Students will have hands on experiments with photosynthesis, fermentation and genetics.

Intentionally Left Blank

## Human Services

Sarpy Center – 91<sup>st</sup> & Giles

Do people seem to be drawn to you for help? Do you think you would like to help people with their problems and concerns? If the answer is “Yes”, you may be interested in the field of Human Services. The Human Services Career Academy prepares students for careers in the “helping professions.” We train students to work in Social Services Agencies; helping others overcome social barriers, such as poverty, abuse, addiction, oppression and mental health challenges. Coursework also provides a strong foundation for those looking to continue at MCC or transfer to a 4-year college after high school.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	HMSV 1010	Introduction to Human Services	4.5	1:00-3:00	M, W
	PSYC 1010	Introduction to Psychology	4.5	1:00-3:00	T, TH
<b>December, 2024 – February, 2025</b>					
	HMSV 1150	Community Resources	4.5	1:00-3:00	M, W
	SOCI 1050	Sociology of Healthcare	4.5	Online	
<b>March – May, 2025</b>					
	HMSV 1120	Helping Skills & Techniques	4.5	1:00-3:00	M, W
	PSYC 1110	Parenting & Family Problem Solving	4.5	Online	
<b>TOTAL CREDIT HOURS</b>			<b>27</b>		

### COURSE DESCRIPTIONS

**HMSV 1010 - Introduction to Human Services** - This introductory course explores the human services field. Students are exposed to historical perspectives, ethics, and the role of the community support human service practitioner in various agencies and specific areas of human services employment.

**SOCI 1050 – Sociology of Healthcare** - This course is a systematic attempt to relate sociological concepts to the fields of physical and mental health and illness. It provides an overview of socio-cultural aspects of health and includes community and healthcare, medical education, and the hospital as social institutions.

**HMSV 1150 – Community Resources** - This course provides students with the opportunity to explore career options in the human services field through direct observation in a field setting and through guest speakers. This course also helps students to begin to develop knowledge of community resources.

**PSYC 1010 – Introduction to Psychology** - This course is an introduction to the science of psychology, including the application of critical thinking to the study of learning theory, memory, personality, growth and development, biological and neurological aspects, abnormal behavior, therapies, intelligence, motivation, emotion, sensation, perception, and theoretical perspectives.

**HMSV 1120 – Helping Skills & Techniques** - This course introduces students to basic interpersonal skills such as appropriate self-disclosure, active listening, and constructive challenging. The course also prepares students to use professional helping skills on a one-to-one basis. Helping skills that are discussed and practiced include at least four of the following: active listening, reflective feedback, summarizing, self-disclosing, displaying empathy, confronting, establishing rapport, and communicating at the client’s comprehension level. Students acquire and demonstrate skills through videotaped role-plays, in-class role-plays, counseling critiques, case studies, and other experiential exercises.

## Human Services Continued

**PSYC 1110 – Parenting & Family Problem Solving** - This course introduces students to effective parenting skills and strategies for solving family problems. It emphasizes parent-child relations, developmental milestones, family systems theory, family communication, family composition, and issues related to abuse and neglect. Students explore parenting challenges, such as single parenthood, divorce, custody issues, step-family systems, and conflict management. Other topics include same-sex parenting, inter-racial families, and families faced with natural disasters and other catastrophes.



**IT Technician - Cyber Security**  
South Omaha Campus – 27<sup>th</sup> and Q St

Students will acquire a background in cybersecurity related to information, software, systems, users, and organizations including aspects of policy, human factors, and impact on society. The curriculum for these two career certificates directly aligns to the following IT industry certifications: CompTIA A+, Microsoft Desktop Associate (MDA), and Cisco Certified Network Associate (CCNA), and CompTIA Security+.

**Year 1 Student 2024-2025**

Dates	Course	Title	Credits	Times	Days
<b>September – November 2024</b>					
	INFO 1105	IT Essentials PC Repair I	4.5	1:00 – 3:00	M, W
	INFO 1200	Cisco Introduction to Networks	4.5	1:00 – 3:00	T, TH
<b>December, 2024 – February, 2025</b>					
	INFO 1125	IT Essentials PC Repair II	4.5	1:00 – 3:00	M, W
	INFO 1201	Cisco Switching, Routing, and Wireless	4.5	1:00 – 3:00	T, TH
<b>March – May, 2025</b>					
	INFO 1110	Windows Operating Systems I	4.5	1:00 – 3:00	M, W
	INFO 2220	Cisco Enterprise Networking, Security, & Automation	4.5	1:00 – 3:00	T, TH
<b>TOTAL CREDIT HOURS</b>			<b>27</b>		

**Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024)**

Dates	Course	Title	Credits	Times	Days
<b>September – November 2024</b>					
	INFO 1111	Linux Operating Systems I	4.5	1:00 – 3:00	M, W
	INFO 2805	Network and Info Security Basics	4.5	1:00 – 3:00	T, TH
<b>December, 2024 – February, 2025</b>					
	INFO 2806	Network Attacks, Intrusions, & Penetration Testing	4.5	1:00 – 3:00	M, W
	INFO 2809	Information Systems, Forensic, & Legal Topics	4.5	1:00 – 3:00	T, TH
<b>March – May, 2025</b>					
	INFO 1933	Securing and Monitoring IoT	4.5	1:00 – 3:00	M, W
	INFO 2121	Scripting for Automation & Security	4.5	1:00 – 3:00	T, TH

**Summer – Optional courses need to complete the MCC Cybersecurity Career Certificate.**

INFO 2362 - Building Secure Environments  
INFO 2810 - Security Capstone/Internship

To earn the Cisco Advanced Networking (CCNA) certification, student needs to complete INFO 1200, INFO 1201 and INFO 2220.

<b>TOTAL CREDIT HOURS</b>	<b>22.5</b>
<b>TOTAL CREDIT HOURS AFTER 2 YEARS</b>	<b>49.5</b>

All students must have a basic knowledge of computer technology. All classes are Hybrid format. MCC's credit online, hybrid and web-enhanced courses are delivered via a Learning Management System called Canvas. Canvas is a website that provides a user-friendly way for teachers to place course materials, interactive and/or collaborative activities, and assessments online. Students have an intuitive way to interact with the course materials and with other students. With Canvas, students can upload files to submit assignments, post messages to forums, take tests and more. Students can check their progress and grades at any time during the course.

### **COURSE DESCRIPTIONS**

**INFO 1105 - IT Essentials PC Repair I** - This course emphasizes the functionality of hardware and software components as well as suggested best practices in maintenance and safety issues. Through hands-on activities, students learn how to assemble and configure a computer, install operating systems and software, and perform basic troubleshooting of hardware problems. This course prepares students for Comp TIA A+ certification.

**INFO 1200 – Cisco Introduction to Networks** - Students are introduced to the architecture, structure, functions, components, and models of the Internet and other computer networks. Concepts covered include: numbering systems, networking models and protocols, networking equipment types and configuration, and core network security principles. Students will design, build, and troubleshoot a small network and configure and secure routers and switches.

**INFO 1125 - IT Essentials PC Repair II** - *Prerequisite: INFO 1105 must be completed prior to taking this course.* This course covers advanced, hands-on topics of hardware and software. Emphasis is on operating systems, security software troubleshooting and operational procedures. Through hands-on activities, students learn configuration procedures and more advanced trouble shooting procedures. This course further prepares students for the Comp TIA A+ certification.

**INFO 1201 – Cisco Switching, Routing, and Wireless** - *Prerequisite: INFO 1200.* Students will examine the architecture, components, and operations of routers and switches in a small network. Students configure routers and switches based on specifications to enable basic network functionality for both wired and wireless networks. Students will troubleshoot routers and switches and resolve common issues to include virtual LANs, spanning-tree protocol, EtherChannel, inter-VLAN routing, and redundant links in both IPv4 and IPv6 networks. Students will examine network vulnerabilities and harden devices to mitigate attacks. Students develop the knowledge and skills needed to implement DHCP.

**INFO 1110 – Windows Operating Systems I** - This course introduces students to Microsoft Windows desktop operating system. Students learn fundamental concepts to effectively use and manage the Microsoft Windows desktop operating system. Many of the objectives comply with industry standard certification exam objectives. NOTE: Students must receive a C or better in this course to enroll in a capstone course.

**INFO 2220 – Cisco Enterprise Networking, Security, & Automation** - *Prerequisite: INFO 1200 and INFO 1201* Students examine the architecture, components, and operations of routers and switches in a larger and more complex network. Students will develop and apply advanced configurations for routers and switches enabling advanced functionality to include more complex security configuration. By the end of this course, students will configure and troubleshoot routers and switches and resolve common issues with OSPF, ACLs, NAT, VPN, and QoS. Students will also develop network monitoring performance metrics and learn virtualization and automation concepts.

**INFO 1111 - Linux Operating Systems I** - Students gain a broad overview of the Linux operating system. Students learn the fundamental concepts of Linux required to use the system effectively. Topics include the BASH shell, getting help, editors, variables, redirection and piping, directories and files, links, the FHS, locating and searching files, and other basic topics. INFO 1121 picks up where this course leaves off in covering the sections of TestOut's Linux Pro product. Together they prepare the student for Linux+ certification.

**INFO 2805 – Network and Info Security Basics** - This course is a survey of network and information security. Topics include threat assessment, risk management, establishing and managing network security policy, user training, security models, objectives, architectures, and the investigative process. It covers information security topics, such as constitutional issues, applicable laws, and right and rules of evidence. Students also discuss confidentiality, integrity, availability, accountability, and auditing.

**INFO 2806 - Network Attacks, Intrusions, and Penetration Testing** - This course covers attack and intrusion methods and how to defend against them. By studying network security from the point of view of the cracker and hacker, students get hands-on exposure to penetration testing and intrusion detection systems as well as methods used to circumvent systems, malicious code and its impact on systems, and defense against attacks.

**INFO 2809 – Information Systems, Forensics, and Legal Topics** - This course presents computer forensics concepts, tools, and data analysis. Students explore civil and common law issues that apply to information systems and gain practical experience in evidence detection and preservation as well as the concepts of establishing communications with company leadership and investigative agencies.

**INFO 1933 – Securing and Monitoring IoT Networks** - Students examine what the Internet of Things (IoT) encompasses and how rapid change increases security threats. Students analyze how programming, software and hardware interface with IoT core components. IoT devices are implemented using basic networking hardware and protocols while running security processes.

**INFO 2121 – Scripting for Automation & Security** - Students will apply a scripting language to automate tasks for network devices, operating systems and applications. This course will focus on configuring and securing devices with scripts. Successful participants will be able to automate many tasks with scripts and reduce effort by creating scripts that can run interactively or automatically.

Intentionally left blank

## Photography

Elkhorn Valley Campus – 204<sup>th</sup> and Dodge Streets

Students will explore photography by means of digital image capture, editing and printing. It is through this practice of camera operation, editing, and composition that students will fully realize both a technical and conceptual understanding of the photographic medium as a means of visual communication. Student successfully completing the courses below will be eligible for the Digital Photography Career Certificate. These courses will allow students to get a head start on an Associate's Degree in Photography.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	PHOT 1101	Basic Digital Photography	6	12:30 – 3:00	MTWTH
<b>December, 2024 – February, 2025</b>					
	PHOT 1103	Intermediate Digital Photography	6	12:30 – 3:00	MTWTH
<b>March – May, 2025</b>					
	PHOT 1107	Basic Photographic Lighting	6	12:30 – 4:10	MW
	PHOT 1105	History of Photographic Practice	6	12:30 – 4:10	TTH
<b>TOTAL CREDIT HOURS</b>			<b>24</b>		

### COURSE DESCRIPTIONS

**PHOT 1101 – Basic Digital Photography** - Students are introduced to digital photographic image-making and printing. Emphasis is on camera operation, photographic composition, and technical and conceptual understanding of the photographic medium. All work is evaluated regularly in critiques. Students must have access to a digital camera with manual aperture and shutter controls for this class and a portable, external hard drive. Type of camera used is up to the instructor's discretion.

**PHOT 1103 – Intermediate Digital Photography** - This course surveys digital imaging and processing methods relevant to photography. Students continue the work of basic photography to capture digital images and examine in greater depth image-editing applications and digital printing processes. Students produce a portfolio of creative work based on technical, aesthetic and conceptual criteria.

**PHOT 1105 – Basic Photographic Lighting** - Students become acquainted with photographic imagery of the past and present. Students learn photography's interrelationship with society and culture, art and technology, and the principles of visual design.

**PHOT 1107 – History of Photographic Practice** - Students are introduced to studio flash photographic lighting. Students work with digital technology and lighting equipment in a studio setting to design the appropriate lighting for the subject. All work is completed using the student's personal digital camera and printed in the digital lab.

Intentionally left blank

## Powersports and Outdoor Power Equipment Technician

South Omaha Campus – 27<sup>th</sup> & Q St

Powersport technicians maintain, troubleshoot and repair equipment found in the powersport industry, including marine, snowmobile, motorcycle, all-terrain vehicle (ATV) and lawn / garden equipment. Students will gain the knowledge and hands-on experience to perform competently at the dealership level and be trained to gain the soft skills to help you toward the goal of management, manufacturer technical service representative or business ownership. Upon Successful completion of the courses below, student will have earned industry recognized certifications, as well as Outdoor Power Equipment Technician Career Certificate from MCC and be ready for entry level employment at local dealerships/shops.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	PSPT 1000	Basic Engine Principles I	4.5	1:00 – 3:00	M-TH
<b>December, 2024– February, 2025</b>					
	PSPT 1100	Introduction to Powersports Electrical Systems	4.5	1:00 – 3:00	M-TH
<b>March – May, 2025</b>					
	PSPT 1300	Outdoor Power Equipment	4.5	1:00 – 3:00	M-TH
<b>TOTAL CREDIT HOURS YEAR 1</b>			<b>13.5</b>		

### Year 2 Student 2024-2025 (Students who took 1<sup>st</sup> year 2023-2024)

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	PSPT 1110	Introduction to Powersports Fuel Systems	4.5	1:00 – 3:00	M-TH
<b>December, 2024– February, 2025</b>					
	PSPT 1310	Engine Service and Rebuild	4.5	1:00 – 3:00	M-TH
<b>March – May, 2025</b>					
	PSPT 2900	Special Topics in Powersports and Outdoor Power Technology	4.5	1:00 – 3:00	M-TH
<b>TOTAL CREDIT HOURS AFTER YEAR 2</b>			<b>27</b>		

### COURSE DESCRIPTIONS

**PSPT 1000 - Basic Engine Principles I** - Learners study the history, development, and engine operating principles as they relate to marine and recreational engine mechanics. This course familiarizes learners with basic repair of these engines. This course includes troubleshooting and repair of small gas engines and power equipment. The proper procedures for testing and repair of electrical components are covered.

**PSPT 1100 - Introduction to Powersports Electrical Systems** - Learners study theory of electricity and magnetism. Also included are units on wiring, circuitry, and troubleshooting, ignition systems, charging systems, and their application. This is a basic electricity course, which is built on throughout the program. The course introduces the learner to electrical theory, wiring schematics, symbols, and the basic tools used to test electrical components.

## **Powersports and Outdoor Power Equipment Technician Continued**

**PSPT 1110 - Introduction to Powersports Fuel Systems** - This course will introduce the student to basic carburetors, fuel pumps and EFI systems used on various powersports equipment. The focus is on component identification and the function of the component in the system. This course also covers the current fuel recommendations and emissions for today's modern powersports equipment.

**PSPT 1300 - Outdoor Power Equipment** - This course includes the study of basic clutches, drive mechanisms, outdoor power equipment, and steering systems. Transmissions and drive systems as they apply to various manufacturers are also covered. This is a beginning look at the many drive systems used on lawn and garden equipment. This course also includes basic repair on hand held outdoor power equipment.

**PSPT 1310 - Engine Service and Rebuild** - Learners overhaul and repair lawn, garden, and recreational engines under shop conditions according to manufacturers' recommendations. Learners gain valuable experience in shop conditions doing complete engine overhauls on the many types of engines used.

**PSPT 2900 - Special Topics in Powersports and Outdoor Power Technology** - This course provides the opportunity for other instruction in special content areas not included in other powersports and outdoor power courses.



## Pre-Apprenticeship Plumbing

Fort Omaha Campus – 30th and Fort St – Construction Education Center

This program is for students interested in learning about the plumbing profession, preparing them for a plumbing apprenticeship, or seeking the skills to find a job in that field.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – November, 2024</b>					
	PLBG 1010	Introduction to Plumbing	9	1:00 – 3:00	MTWTH
<b>December, 2024– February, 2025</b>					
	PLBG 1020	Basic Residential Plumbing	9	1:00 – 3:00	MTWTH
	EMSP 1010	Heartsaver First Aid with CPR and AED (First three weeks)	1	12:30 – 3:10	F
	CNST 1110	Construction Safety (Next four weeks)	1	1:00 – 3:00	F
<b>March – May, 2025</b>					
	PLBG 1030	Basic Commercial Plumbing	9	1:00 – 3:00	MTWTH
<b>TOTAL CREDIT HOURS</b>			<b>29</b>		

### COURSE DESCRIPTIONS

**PLBG 1010 - Introduction to Plumbing** – This course will introduce the students to the Plumbing Trade. The topics covered in this course will include plumbing history, plumbing tools, materials, safety, applicable math for the trade, work ethic, and careers in the industry.

**PLBG 1020 - Basic Residential Plumbing** – Students continue to learn the residential side of plumbing, focusing mainly on wood structures, materials, and tools. The items discussed in this course direct attention on wood-framed structures such as single and multi-family dwellings along with the different types of materials and tools that are commonly used with these structures.

**PLBG 1030 - Basic Commercial Plumbing** – Students study the commercial side of the plumbing trade. The focus is on metal stud framed, masonry, and concrete structures. The items discussed in the class direct attention to the metal, masonry, and concrete structures along with the different types of materials and tools that are common with these structures.

**CNST 1110 - Construction Safety** - This course provides training outlined by the Occupational Safety and Health Administration (OSHA). This course supplies students with the recommended safety requirements for working in the construction field.

**EMSP 1010 - Heartsaver First Aid with CPR and AED** - This course teaches rescuers to effectively identify and treat adult emergencies in the critical first minutes of injury or illness until emergency medical service personnel arrive. The course provides basic training solutions for first aid, adult CPR, and automated external defibrillator.

Intentionally left blank

## Prototype Design

Fort Omaha Campus – 30<sup>th</sup> and Fort St - CAET Bldg 24, Room 112

A prototype is a sample or model built to test a concept or process for a particular application that can be replicated or used to learn from. A prototype designer uses troubleshooting skills, creative thinking, and analytical skills to design the product. Students use hands-on application skills from product conception to completion.

### Year 1 Student 2024-2025

Course Dates	Course No.	Course Title	Credits	Times	Days
<b>September – November 2024</b>					
	AMFG 1000	Intro to Prototype Design	4.5	1-3p	M, W
	AMFG 1105	Digital Electronics in Prototyping	4.5	1-3p	T, TH
<b>December 2024 – February 2025</b>					
	AMFG 1210	Prototyping with SolidWorks	4.5	1-3p	M, W
	AMFG 1225	How to Build Almost Anything	4.5	1-3p	T, TH
<b>March - May 2025</b>					
	AMFG 1320	Intermediate SolidWorks	4.5	1-3p	M, W
	AMFG 2510	Robotic Concepts	4.5	1-3p	T, TH

**TOTAL CREDIT HOURS: 27**

Second year options are available for students wishing to continue. Classes are determined based on student interest.

All students must have a basic knowledge of computer technology.

### COURSE DESCRIPTIONS

**AMFG 1000 – Introduction to Prototype Design** - Students explore the fundamentals of prototype design. Students learn the three integrated concepts of design thinking, business acumen, and low-volume production to ideate, prototype and manufacture a human-centered product. A comparison of careers and occupations that require prototyping skills are also explored. . This course includes a Tape and Rule Measurement Certification and an Occupational Safety and Health Administration (OSHA) Certification. Additional cost of \$50 for project materials and certifications.

**AMFG 1105 – Digital Electronics in Prototyping** - Students are introduced to basic electronic circuits, digital devices, and digital circuits. This course emphasizes the concepts and principles through hands-on, project-based activities. Concepts include electronic components, microcircuits, and basic electronics theory. Students also learn to read schematic diagrams, build circuit prototypes, test prototypes, and construct circuits using a variety of tools and circuit boards. This course includes the National Career Readiness Certification (NCRC) and the Gallup StrengthsFinder assessment. There is an additional cost of \$50 for materials and supplies.

**AMFG 1210 – Prototyping with SolidWorks** - Students explore the SolidWorks interface and use fundamental techniques, tools and workflows to bring prototypes to life in three dimensions. Through hands-on exercises, assignments, and team projects, students use digital sketch tools to draw, create, and modify solids and complex shapes and then print the shapes, parts and assemblies using a variety of materials and equipment. There is an additional cost of \$50 for materials and supplies.

**AMFG 1225 – How to Build Almost Anything** - Students learn advanced methods of prototype design using a variety materials and equipment found in the Prototype Design Laboratory. Students build at least two major projects and several mini projects that enable them to develop skills using a variety of materials and equipment. The focus of the course is application of skills rather than theory and concepts. There is an additional cost of \$50 for materials and supplies.

## Prototype Design Continued

**AMFG 1320 – Intermediate SolidWorks** - Students use the SolidWorks interface and intermediate techniques, tools and workflows to bring prototypes to life in three dimensions. Through hands-on exercises, assignments, and team projects, students use digital sketch tools to draw, create, and modify solids and complex shapes and then print the shapes, parts and assemblies using a variety of materials and equipment. There is an additional cost of \$50 for materials and supplies.

**AMFG 2510 – Robotic Concepts** - Students are introduced to the design, use, and programming of robots. Topics include robot anatomy, sensing, degrees-of-freedom, the Cartesian coordinate system, lean manufacturing concepts, maintenance, as well as, the history and future of robotic concepts in modern technology. Students demonstrate safe practices when programming robots for a variety of automated tasks. There is an additional cost of \$50 for materials and supplies.

**\*Extra cost: project fees, certification and textbooks.**

## Web and Mobile App Programming

Fort Omaha Campus – 30th and Fort St

This certificate prepares students to successfully manage the World Wide Web environment. Students are provided with a strong technical foundation in developing content for the World Wide Web and any Internet-related support.

### Year 1 Student 2024-2025 (High School Computer Programming Level I Career Certificate)

Dates	Course	Title	Credits	Times	Days
September – November 2024					
	INFO 1003	Problem Solving and Programming Logic	4.5	1:00 – 3:00	M, W
	INFO 1571	2D Game Programming	4.5	1:00 – 3:00	T, TH
December, 2024 – February, 2025					
	INFO 1521	Java Programming I	4.5	1:00 – 3:00	M, W
	INFO 1335	Software Engineering Foundations	4.5	1:00 – 3:00	T, TH
March – May, 2025					
	INFO 2341	Fundamentals of Software Testing	4.5	1:00 – 3:00	M, W
	INFO 1531	Java Programming II	4.5	1:00 – 3:00	T, TH
	TOTAL CREDIT HOURS		27		
Summer (optional)					
	INFO 1541	Java Programming III	4.5	Online	

**\*To earn Computer Programming Career Certificate, student needs to complete INFO 1541 Java Programming III.**

### Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024) (High School Web Programming Level II Career Certificate)

Dates	Course	Title	Credits	Times	Days
September – November 2023					
	INFO 1526	C# (C-Sharp) Programming I	4.5	1:00 – 3:00	M, W
	INFO 1579	JavaScript I	4.5	1:00 – 3:00	T, TH
December, 2023 – February, 2024					
	INFO 1536	C# (C-Sharp) Programming II	4.5	1:00 – 3:00	M, W
	INFO 2579	React	4.5	1:00 – 3:00	T, TH
March – May, 2024					
	INFO 2589	TypeScript	4.5	1:00 – 3:00	M, W
	INFO 2439	Mobile Application Development (Flutter)	4.5	1:00 – 3:00	T, TH
		TOTAL CREDIT HOURS	27		
		TOTAL CREDIT HOURS AFTER 2 YEARS	54		
Summer (optional)					
	INFO 1546	C# (C-Sharp) Programming III	4.5	Online	
	INFO 2599	React Native Mobile Development	4.5	Online	

**\*To earn Web App Development Career Certificate, student needs to complete 2 courses: INFO 1546 C# (C-Sharp) Programming III and INFO 2134 React Native Mobile Development.**

## Web and Mobile App Programming Continued

All students must have a basic knowledge of computer technology. All classes are Hybrid format. MCC's credit online, hybrid and web-enhanced courses are delivered via a Learning Management System called Canvas. Canvas is a website that provides a user-friendly way for teachers to place course materials, interactive and/or collaborative activities, and assessments online. Students have an intuitive way to interact with the course materials and with other students. With Canvas, students can upload files to submit assignments, post messages to forums, take tests and more. Students can check their progress and grades at any time during the course.

### **COURSE DESCRIPTIONS**

**INFO 1003 - Problem Solving and Programming Logic** - Students learn techniques that will help build a firm foundation in problem solving and programming concepts. These techniques present the concepts of problem solving, and introduction to how problems are solved on computers, mathematical concepts required for problem solving using a computer and logic needed to understand a problem. Students use flowcharts, pseudocode, and algorithms to document and demonstrate logic as a solution to a problem.

**INFO 1571 – 2D Game Programming** - Students will use HTML, CSS and JavaScript to create a game. The student will be able to design, create, and publish their 2D game at the end of this course.

**INFO 1521 - Java Programming** - *Prerequisite: INFO 1003 must be completed prior to taking this course.* This course introduces the Java object-oriented programming language. Topics and activities include Java language essentials, writing Java programs in order to solve a variety of basic problems, design and testing techniques, working with arrays and simple data structures, creating basic graphical interfaces using applications and applets, and working with input and output files.

**INFO 1335 - Software Engineering Foundations** - Students explore software engineering concepts including project management and software architecture, design methodologies, and software testing practices in a collaborative development environment.

**INFO 2341 – Fundamentals of Software Testing** - Software needs to be tested for bugs and to ensure the product meets requirements and produces desired results. In this course, students learn the fundamentals of software testing and quality assurance. This is a course for beginners and focuses on how to perform manual testing; however, advanced concepts like automated and unit testing are introduced as well.

**INFO 1531 - Java Programming II** - *Prerequisite: INFO 1521 must be completed prior to taking this course.* This course is for students experienced with Java and object-oriented programming. Topics include additional exception handling, data structures, database access and applications, multimedia, multithreading, and Internet/browser applications.

**INFO 1526 – C# (C-Sharp) Programming I** - This course introduces programming the graphical user interface and console applications of Microsoft Visual C# (C-Sharp) programming using the current Visual Studio.NET environment. Students use Visual C# programming to develop a variety of applications with graphical client interfaces and use console programs to perform programming tasks. The course emphasizes proper windows design, placement of controls, and proper coding of the Visual C# programming language for business-type projects. Students who enroll in this course must have a thorough knowledge of the Windows environment. (Formerly Visual C# Programming I)

**INFO 1579 - JavaScript I** - Students learn basic data structures and methods used to work with JavaScript on the client side as well as on the server side.

**INFO 1536 – C# (C-Sharp) Programming II** - This course includes more advanced topics such as XML, database, text and binary file access, data structures, sets, and user interfaces. (Formerly Visual C# Programming II)

## Web and Mobile App Programming Continued

**INFO 2579 – React Web Application Development** Students learn Full Stack development workflow using React, a JavaScript library for building user interfaces and applications using the latest innovative technologies emerging in the world of web development.

**INFO 2589 – TypeScript Web Application Development** - Students learn advanced topics in web development using TypeScript. Students apply web development skills to create TypeScript web applications. This course introduces topics of industry development practices and tools for students to become proficient as modern web developers in the industry.

**INFO 2439 – Mobile Application Development (Flutter)** - Students learn hybrid mobile application development using the Flutter framework with the Dart programming language.

Intentionally left blank



## Welding and Fabrication Technology

Fort Omaha Campus – 30th and Fort St – Construction Education Center  
South Omaha Campus – 27<sup>th</sup> and Q St – Center for Advanced Manufacturing

The Welding Technology program provides training in the basic and advanced skill levels of different welding processes which includes lecture and hands-on lab training under the close supervision of qualified instructors.

### Year 1 Student 2024-2025

Dates	Course	Title	Credits	Times	Days
<b>September – October, 2024</b>					
	WELD 1100	Industrial Cutting Processes	3	1:00-3:10	M, T, W, TH
<b>October - November, 2024</b>					
	WELD 1500	Shielded Metal Arc Welding (SMAW)	3	1:00-3:10	M, T, W, TH
<b>December, 2024 – January, 2025</b>					
	WELD 1200	Gas Metal Arc Welding (MIG) - Steel I	3	1:00-3:10	M, T, W, TH
<b>January – February, 2025</b>					
	WELD 1300	Oxy Fuel Welding	3	1:00-3:10	M, T, W, TH
<b>December 2024 – February, 2025</b>					
	WELD 1910	Special Topics in Welding-Skills USA Training I	1	1:15-2:45	F
<b>March – April, 2025</b>					
	WELD 1400	Gas Tungsten Arc Welding (GTAW) - Steel 1	3	1:00-3:10	M, T, W, TH
<b>April - May, 2025</b>					
	WELD 1700	Introductory Fabrication	3	1:00-3:10	M, T, W, TH
<b>TOTAL CREDIT HOURS</b>			<b>19</b>		

### Year 2 Student 2024-2025 (students who took 1<sup>st</sup> year in 2023-2024)

Dates	Course	Title	Credits	Times	Days
<b>September – October, 2024</b>					
	WELD 2200	Gas Metal Arc Welding (MIG)	3	12:00-4:20	M, W
<b>October - November, 2024</b>					
	WELD 1410	Gas Tungsten Arc Welding (TIG)	3	12:00-4:20	M, W
<b>December, 2024 – January, 2025</b>					
	WELD 1510	SMAW (Stick) - Vertical	3	12:00-4:20	M, W
<b>January – February, 2025</b>					
	WELD 2500	SMAW (Stick) - Horizontal	3	12:00-4:20	M, W
<b>March – April, 2025</b>					
	WELD 2510	SMAW (Stick) - Overhead	3	12:00-4:20	M, W
<b>April - May, 2025</b>					
	WELD 1420	Gas Tungsten Arc Welding (TIG)	3	12:00-4:20	M, W
<b>TOTAL CREDIT HOURS</b>			<b>18</b>		
<b>TOTAL CREDIT HOURS AFTER 2 YEARS</b>			<b>37</b>		

**Tools and Materials:** Students provide work boots and safety glasses. MCC will provide, on loan, most of the appropriate equipment and tools for each course. Students will be held responsible for lost and/or broken equipment and tools.

### COURSE DESCRIPTIONS

**WELD 1100 - Industrial Cutting Processes** - Students gain a working knowledge of oxy-fuel cutting (manual and machine), plasma cutting (manual and machine), and air carbon arc and plasma gouging.

## Welding Continued

**WELD 1200 - Gas Metal Arc Welding (MIG) - Steel I** - This course uses the theory and techniques in basic gas metal arc welding to produce sound fillet welds and sound groove welds in both the flat and vertical positions. Students weld using short-circuit and spray modes of metal transfer.

**WELD 1300 - Oxy-Acetylene Welding** - This course covers the basic skills and use of equipment necessary to be knowledgeable in this discipline. Students learn to weld various joint types in all positions with steel and braze filler materials. This is an excellent preparatory class for TIG welding classes.

**WELD 1400 - Gas Tungsten Arc Welding (TIG) - Steel I** - This course emphasizes the theory and techniques used in basic gas tungsten arc welding of steel fillet and groove welds in the flat and vertical positions. It covers the equipment and its proper adjustment and also includes the many types of tungsten electrodes and the use of different gases.

**WELD 1500 - Shielded Metal Arc Welding (Stick) – Flat** - This course covers fundamental understanding and skills in the safe use of arc welding equipment. Typical operations include striking the arc, making fillet welds in the flat position, and making groove welds in the flat position. It uses a variety of methods to examine the weldments such as visual inspection, fillet weld break tests, and root/face bend test specimens.

**WELD 1700 - Introductory Fabrication** - *Prerequisite: WELD 1100, WELD 1200.* This is a basic course in the fabrication of projects. It explores the use of layout tools and project drawings or sketches and emphasizes actual vs. estimated time and cost considerations.

**WELD 1910 - Special Topics in Welding-Skills USA Training I** - Required course for all students. This course is designed for first year students to learn more about industry standards and help those who have signed up to participate in Skills USA state/national competition.

**WELD 2200 – Gas Metal Arc Welding (MIG) – Steel II** - This course is a continuation of GMAW - Steel I, including fillet and groove welds in the horizontal and overhead positions and the study of pulsed-spray transfer.

**WELD 1410 – Gas Tungsten Arc Welding (TIG) – Stainless I** - This course emphasizes the theory and techniques used in basic gas tungsten arc welding of stainless steel in the flat and vertical positions. It covers the equipment and its proper adjustment and also includes the many types of tungsten electrodes and the use of different gases.

**WELD 1510 – Shielded Metal Arc Welding (Stick) - Vertical** - Vertical position weldments are basic to welding technology. This course studies and uses various techniques in the vertical position, including the use of E6010 and E7018 electrodes.

**WELD 2500 – Shielded Metal Arc Welding (Stick) - Horizontal** - The ability to weld in the horizontal position is important in both plate and pipe welding. Students learn the proper techniques for welding fillet and groove welds using E6010 and E7018 electrodes.

**WELD 2510 – Shielded Metal Arc Welding (Stick) - Overhead** - Overhead weldments are basic to welding technology. This course studies and applies various techniques in the vertical position including the use of E6010 and E7018 electrodes.

**WELD 1420 – Gas Tungsten Arc Welding (TIG) – Aluminum I** - This course emphasizes the theory and techniques used in basic gas tungsten arc welding of aluminum in the flat and vertical positions. It covers the equipment and its proper adjustment and also includes the many types of tungsten electrodes and the use of different gases.