



METROPOLITAN
Community College

CAREER ACADEMY PROGRAM PACKET 2021-2022



To Apply for a Career Academy:

Applications are available December 7, 2020 from your high school guidance counselor, and online at mccneb.edu/careeracademy.

Please submit the application to the address listed on the application.

Application Deadline: March 5, 2021.

QUESTIONS:

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

- Your high school guidance counselor
- Secondary Partnerships 531-MCC-2213 or secondarypartnerships@mccneb.edu

CAREER ACADEMY

PROGRAMS, SCHEDULE, AND DESCRIPTIONS

2021-2022

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 site
- Must complete an application and be selected to participate

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 mccneb.edu/secondary-partnerships 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. 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 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 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.

Fall Quarter 2021 21/FA	Labor Day Recess/College closed Classes begin Classes end	September 6 September 7 November 22	Monday Tuesday Monday
Winter Quarter 2021 - 2022 21/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 25 – 26 December 2 December 22 December 24 – January 2 January 3 January 17 February 28	Thursday Wednesday Monday Monday Monday
Spring Quarter 2022 21/SP	Classes begin Spring Recess/College closed Classes resume Classes end	March 10 April 16-17 April 18 May 25	Thursday Saturday- Sunday Monday Wednesday

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. 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 will have access to the online form once they are registered for classes.

TUITION, BOOKS, AND FEES

TUITION PAYMENT:

Students are responsible for payment of all tuition and fees unless other arrangements are made by the school district or an outside agency. Tuition for the 2021-2022 academic year has not yet been set. Tuition for the 2020-2021 academic year is \$38 per credit hour (this cost is ½ of the standard MCC tuition rate of \$64.* per credit hour = \$33, plus \$5.00 facility fee = \$38). Information about registration and payment procedures are included with the acceptance letter. Tuition is due prior to the start of each MCC quarter. (21/FA = Fall, 21/WI = Winter, 21/SP = Spring)

** Please note - Tuition is based on the rate for the 2020-2021 academic year for Nebraska residents. MCC's tuition and fees schedule is subject to change without prior notice and at the discretion of the MCC Board of Governors.*

BOOKS:

Students will purchase their textbooks. Bookstores are located at MCC's Elkhorn, Fort, Sarpy 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 start typing in Metropolitan Community College. For classes held at the South Campus select South Omaha; for classes held at the Sarpy Center select Sarpy; 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, 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 10	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.

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3-D Animation and Games

Elkhorn Valley Campus – 204th and Dodge

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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	DIMA 1620	Introduction to 3-D Modeling & Animation	4.5	12:30-3:30	M, W
	DIMA 1600	Introduction to the Game Industry	4.5	12:30-3:30	T, TH
December, 2021 – February, 2022					
	DIMA 2625	3-D Modeling for Animation & Games	4.5	12:30-3:30	M, W
	DIMA 1400	Game Design Fundamentals	4.5	12:30-3:30	T, TH
March – May, 2022					
	DIMA 2640	3-D Lab	4.5	12:30-3:30	M, W
	DIMA 2700	3-D Games Development	4.5	12:30-3:30	T, TH
TOTAL CREDIT HOURS			27		

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.

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Administrative Technology

Sarpy Center – 91st & Giles

Office professionals are the core of most businesses. As businesses continue to expand and work with increasingly complex technology, the need for advanced training and professional certification becomes more important every day. This flexible and broadly based degree prepares students for a career in a variety of office and administrative support professions by providing students with a broad knowledge of Microsoft Office™ applications, business office knowledge, and communication and interpersonal skills. These skills provide students the foundation needed to keep the offices organized and running smoothly and to work with much of the valuable data that companies need in today's rapidly changing business world. Aspiring supervisors, executive assistants, and general office workers find this program useful in developing their productivity and capacity for advancement.

Year 1 Student 2021-2022 - Students obtain the Office Administrative Professional Career Certificate

Dates	Course	Title	Credits	Times	Days
September – November 2021					
	INFO 1001	Information Systems and Literacy	4.5	1:00 – 3:00	M, W
	INFO 1010	Customer Service Skills	4.5	1:00 – 3:00	T, TH
	INFO 1013	Keyboard Skillbuilding	2.0	1:00 – 3:00	F
December, 2021 – February, 2022					
	INFO 1008	Business Office Communications	4.5	1:00 – 3:00	M, W
	INFO 1228	MS Office Apps 1	4.5	1:00 – 3:00	T, TH
March – May, 2022					
	INFO 1227	Technology Applications	4.5	1:00 – 3:00	M, W
	INFO 1229	MS Office Apps 2	4.5	1:00 – 3:00	T, TH
		TOTAL CREDIT HOURS	29		

COURSE DESCRIPTIONS

INFO 1001 - Information Systems and Literacy - This course introduces students to computer technology concepts and skills needed to be successful in their academic and professional lives. Topics include hardware, desktop and cloud-based applications, computer ethics, effective research techniques, security, and the Internet. NOTE: A basic understanding of computer systems is recommended prior to taking this course.

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.

INFO 1013 - Keyboard Skillbuilding - Students complete diagnostic testing using the alphabetic keyboard and numeric keypad to determine current keyboarding skills. Students then use the alphabetic keyboard and numeric keyboard to complete individualized practice drills to improve keyboarding speed and accuracy and complete variety of progress check timings 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. Because students progressively improve keyboarding skills throughout the course, proficiency testing to receive credit for the course is not provided.

Administrative Technology Continued

INFO 1228 - MS Office Apps I – Students use basic features of Microsoft Word, Excel, and PowerPoint to produce professional documents, spreadsheets, and presentations. INFO 1229, MS Applications II, is a continuation of this course.

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.

INFO 1229 - MS Office Apps II – This course is a continuation of INFO 1228, MS Applications I. Students use intermediate and advanced features of Microsoft Word, Excel, and PowerPoint to edit and refine professional documents, spreadsheets, and presentations. Students who successfully complete this course are prepared to take the Microsoft Office Specialist (MOS) Associate level Word, Excel, and PowerPoint certification exams.

Advanced Manufacturing

South Omaha Campus – 27th & Q – 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's area as the knowledge and skills learned will be useful in a broad spectrum of manufacturing occupations.

Year 1 Student 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	PROT 1010	Safety Topics for Manufacturing	4.5	12:30 – 3:00	M, W
	PROT 1000	Introduction to Power and Process	4.5	12:30 – 3:00	T, TH
December, 2021 – February, 2022					
	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
March - May, 2022					
	PRMA 1401	Precision Machine Tool I	6	12:30 – 3:00	M, T, W, TH
TOTAL CREDIT HOURS			22		

Year 2 Student 2022-2023 (students who took 1st year in 2021-2022)

Dates	Course	Title	Credits	Times	Days
September – November, 2022					
	PROT 1250	Basic Electricity	6	12:30 – 3:00	M, T, W, TH
December, 2022 – February, 2023					
	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
March – May, 2022					
	INCT 2050	Problem-Solving	3	12:30 – 3:30	M
	INCT 2100	Introduction to Industrial Robotics	4	12:30 – 3:30	T, W, TH
TOTAL CREDIT HOURS			22		
TOTAL CREDIT HOURS AFTER 2 YEARS			44		

Course Descriptions

PROT 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.

PROT 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 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.

Advanced Manufacturing Continued

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 – Seniors Only

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

This program builds a strong foundation of architectural engineering knowledge through project-based and hands-on learning. It prepares students to enter architectural engineering-related industry as BIM/CAD technicians capable of supporting the work of engineers, manufacturers and contractors. Students learn how cutting edge technology and construction techniques influence the production of design and construction documents.

Year 1 Student 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November 2021					
	ARCH 1160	AutoCAD for Architecture	9	1:00 – 3:00	M-TH
December, 2021 – February, 2022					
	ARCH 1115	REVIT Essentials	9	1:00 – 3:00	M-TH
March – May, 2022					
	ARCH 1200	Wood Frame Architecture	9	1:00 – 3:00	M-TH
TOTAL CREDIT HOURS			27		

COURSE DESCRIPTIONS

ARCH 1115- REVIT Essentials - Through hands-on experience, students learn to navigate and operate Autodesk Revit software. Students employ Revit to represent architecture in 2D and 3D space as a means of producing technical construction documents. This course is focused on learning how to model and annotate building parts while utilizing Revit's ability to organize complex data sets. Students also learn how to generate renderings from Revit projects.

ARCH 1200 - Wood Frame Architecture - Students investigate the process by which architects and drafters determine the form of a small wood-frame building and produce the set of drawings, models, and specifications used to build the building.

ARCH 1160 - AutoCAD for Architecture - Students learn 2D computer-aided drawing techniques and foundational skills in an architectural context. Students identify and use AutoCAD software applications to create drawings, documents and schedules for building projects. Students critically analyze needs and problems presented and demonstrate solutions to classic construction document challenges.

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Automotive Collision Technology
South Omaha Campus – 27th and Q St

This program provides students with the skills and knowledge necessary for an entry level position in the auto body industry. Students repair damaged auto body parts and completes detailed painting of vehicles in accordance with factory and dealership specifications using hand tools and power tools.

Year 1 Student 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	AUTB 1200	Non Structural Repair I	6	12:30 – 4:30	M, W
December, 2021 – January, 2022 – 1st 5 weeks					
	AUTB 1040	Auto Collision Repair Welding	3	12:30 – 4:30	M, W
January – February, 2022 – 2nd 5 weeks					
	AUTB 2450	Collision Estimating I	3	12:30 – 4:30	M, W
March – April, 2022 – 1st 5 weeks					
	AUTB 2300	Automotive Refinishing I	3	12:30 – 4:30	M, W
April – May, 2022 – 2nd 5 weeks					
	AUTB 1100	Structural Repair I	3	12:30 – 4:30	M, W
TOTAL CREDIT HOURS			18		

Year 2 Student 2021-2022 (students who took 1st year in 2020-2021)

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	AUTB 1210	Non Structural Repair II	6	12:30 – 4:30	T, TH
December, 2021 – February, 2022					
	AUTB 2310	Automotive Refinishing II	6	12:30 – 4:30	T, TH
March – May, 2022					
	AUTB 1220	Non Structural Repair III	6	12:30 – 4:30	T, TH
TOTAL CREDIT HOURS			18		
TOTAL CREDIT HOURS AFTER 2 YEARS			36		

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.

COURSE DESCRIPTIONS

AUTB 1040 – Auto Collision Repair Welding - Students learn techniques of oxy-acetylene cutting and welding for automotive applications. Students study and practice the theory and use of metal inert gas (MIG) welding, the plasma-cutting torch, 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.

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 and how to work with trim and hardware. Other related subjects are covered.

AUTB 1220 – Non Structural Repair III - *Prerequisite: AUTB 1210.* This course focuses on evaluating major body damage and determining the necessary repairs. The complete job is stressed, from body repair to final refinishing.

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 and 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 manually. It covers different types of damage, plan for repairs, repair or replace decisions, and use of crash guides.

Automotive Technology
South Omaha Campus – 27th & Q

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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – December 2021					
	AUTT 1111	Auto 1: Automotive Fundamentals Theory	4	12:45 – 3:00	M-TH Online
	AUTT 1112	Auto 1: Automotive Fundamentals Lab	8	12:45 – 3:00	M-TH
January – May 2022					
	AUTT 1121	Auto 2: Minor Repair Theory	4	12:45 – 3:00	M-TH Online
	AUTT 1122	Auto 2: Minor Repair Lab	8	12:45 – 3:00	M-TH
TOTAL CREDIT HOURS			24		

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 2020/2021 year was \$40.00.) 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 on-line
- ✓ 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.
- ✓ Students may be asked to interview in March/April for the summer program internship.**
- ✓ Internship can be done during the summer of either the first and/or second year. This is not a requirement for the AYES program. Students must meet the MCC internship requirements.

Automotive Technology Continued

COURSE DESCRIPTIONS

AUTT 1111 – Auto 1: Automotive Fundamentals - Theory Students explore basic elements of the auto repair trade including safety, chemicals, basic tool use, tire repair, TPMS systems, and introduction to electrical repair. Soft skills, such as, attitude, ethics, professionalism, and on-the-job communication are encouraged.

AUTT 1112 – Auto 1: Automotive Fundamentals Lab - Students apply the basic fundamentals covered by AUTT 1111 to hands-on experience with changing oil, tap and dye, basic electrical, charging and starting systems, use of hand tools, and the basics of tire service. In this course, students gain the skills necessary to obtain an entry-level work position.

AUTT 1121 – Auto 2: Minor Repair Theory - Students learn the basic theory and operations of engines, transmissions, and drivetrains including basic ignition systems, hydraulic principles, and related industry-established maintenance. Students also study brake rotor and drum resurfacing, brake system components, and a variety of testing equipment.

AUTT 1122 – Auto 2: Minor Repair Lab - Students apply the fundamentals covered by AUTT 1121 to hands-on experience working with basic ignition systems, hydraulic principles, and related industry-established maintenance. Students perform brake and rotor drum resurfacing and utilize a variety of testing equipment.

Certified Nursing Assistant (CNA)

South Omaha Campus – 27th & Q – Mahoney Building and Fort Omaha Campus – 30th 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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	HIMS 1120	Medical Terminology I	4.5	1:00–2:45	M *hybrid
	WORK 1400	Employability Skills	4.5	1:00–2:45	T, TH
December, 2021 – February, 2022					
	HIMS 1130	Medical Terminology II	4.5	1:00–2:45	M *hybrid
December, 2021 – First 3 weeks					
	EMSP 1000	Cardiopulmonary Resuscitation*	1	1:00–4:00	F
January, 2022 – 2nd 7 weeks					
	EMSP 1012	Community Emergency Response Team*	1	1:00–4:00	F
March – May, 2022 – Fort Omaha Campus					
	HLTH 1200	Long Term Care / Certified Nursing Assistant	6.5	1:00-3:00	M-TH
May TBD					
	HLTH 1200	Clinicals (must attend all days)		6:00-2:30	M, W, TH
May TBD					
	State Testing			TBA	TBA
TOTAL CREDIT HOURS			22		

* **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.**

* **Times for clinicals are subject to change**

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 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 2020-2021 year was \$14.50.)
- Background Check fee will be assessed when the student enrolls in the spring quarter class is necessary prior to starting HLTH 1200. (Fee for 2020-2021 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 - This course assists students in establishing a solid foundation of medical terminology and abbreviations and introduces prefixes, suffixes, and word roots used in the language of medicine. The course emphasizes medical vocabulary as it applies to the anatomy, physiology, and pathology of the human body. Students study the functioning of the body systems, clinical/surgical procedures, and therapies and examine normal, pathological, clinical, and laboratory considerations in order to best prepare for entrance into the healthcare professions. The course also emphasizes correct spelling and pronunciation.

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

This course is a continuation of HIMS 1120. It presents additional body systems, 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.

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.

WORK 1400 – Employability Skills - This course allows students to enhance their interpersonal skills, improve their ability to work in teams, learn to communicate effectively, think creatively, use problem-solving techniques, and explore competitive job-seeking strategies.

Civil Engineering Technology – Seniors Only

Fort Omaha Campus – 30th and Fort – 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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November 2021					
	SCET 1120	AutoCAD Essentials	9	1:00 – 3:00	M-TH
December, 2021 – February, 2022					
	SCET 1150*	AutoCAD Civil 3-D Fundamentals	9	1:00 – 3:00	M-TH
March – May, 2022					
	SCET 1000	Civil Engineering Fundamentals (First five weeks)	4.5	1:00 – 3:00	M-TH
	SCET 2410	Civil Site Design (Second five weeks)	4.5	1:00 – 3:00	M-TH
	TOTAL CREDIT HOURS		27		

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 - 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.

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Construction Technology

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

Students partake in classroom and practical application exercises, which supply them with knowledge and skills in the construction management area. A 30-hour OSHA construction safety certification is included.

Year 1 Student 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November 2021					
	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
December, 2021 – February, 2022					
	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
	CNST 1370	Exterior Finish	6.5	1:00 – 3:00	M-TH
March – May, 2022					
	CNST 1240	Interior Finish & Cabinetry	9	1:00 – 3:00	M-TH
		TOTAL CREDIT HOURS	26.5		

Year 2 Student 2021-2022 (students who took 1st year in 2020-2021)

Dates	Course	Title	Credits	Times	Days
September – November 2021					
	CNST 1360	Floor, Wall, Stair & Ceiling Framing	9	1:00 – 3:00	M-TH
December, 2021 – February, 2022					
	CNST 2360	Roof Framing	6.5	1:00 – 3:00	M-TH
March – May, 2022					
	CNST 1400	Introduction to Masonry	6.5	1:00 – 3:00	M-TH
Summer 2022 Dates TBA					
	CNST 2981	Internship	4		
		TOTAL CREDIT HOURS	26		
		TOTAL CREDIT HOURS AFTER 2 YEARS	52.5		

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.

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.

Construction Technology Continued

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.

CNST 2981 – Internship - *Prerequisites (2) GPA of 2.5 and career certificate or equivalent in framing, concrete, masonry management, cabinetry, or commercial construction; or instructor approval.* This internship gives students the opportunity to develop skills in the field and exposes them to established craftspeople. Applications for internships must be made through the program full-time faculty. Based on state guidelines, students must complete 40 hours of work for each credit hour.

Criminal Justice – Seniors Only

Sarpy Center – 91st & 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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	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
December, 2021 – February, 2022					
	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
March – May, 2022					
	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
		TOTAL CREDIT HOURS	27		

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.

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Culinary Arts Foundations

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

Students who successfully complete all courses are eligible to receive a Career Certificate in Culinary Arts Foundations. (CAFSD)

1 Year Academy 2021-2022

Dates	Course	Title	Credits	Times	Scheduled Days
September – November 2021					
	CHRM 1000	Orientation	1.5	2:05 – 3:30	M
	CHRM 1020	Sanitation	2	12:30 – 1:25	M-T
	CHRM 1030	Introduction to Professional Cooking	4	1:40 – 3:30	T
				12:30 – 3:30	W-TH
December, 2021 – February, 2022					
	MATH 1242	Applied Math for Hospitality	4.5	12:30 – 2:30	M-T
	CHRM 1210	Baking Basics	4	2:35 – 3:30	M-T
				12:30 – 3:30	W-TH
March – May, 2022					
	CHRM 2350	Culinary Nutrition	4.5	12:30 – 3:30	M* & W
	HUMS 1160	Humanities and Food Culture	4.5	12:30 – 3:30	T* & TH
		*Hybrid lecture format with some online content required			
		TOTAL CREDIT HOURS	25		

COURSE DESCRIPTIONS

CHRM 1000 - Orientation - This course is an introduction to the culinary, hospitality, research, and management program. Topics include the professional kitchen, an overview of the tremendous career opportunities available in the industry, and portfolio development.

CHRM 1020 – Sanitation - This course includes the study of safe food handling, identification of food-borne illness and establishment of a food safety system. The study of the flow of food through the operation, as well as safe storage, sanitary facilities, and equipment are included. Other topics include establishment of an integrated pest management system, accident prevention, and crisis handling. There will be an extensive discussion of sanitary regulations, agencies, and employee sanitation training. In order to pass this course, students must successfully pass the National Restaurant Association Education Foundation, ServSafe Food Handler test, and will subsequently receive a certificate of achievement. All further Culinary lab classes require successful completion of this course.

CHRM 1030 - Introduction to Professional Cooking - This course guides students through the principles of introductory food handling, preparation, and cooking. Students learn and apply professional techniques common to restaurants and other food-service outlets. (Formerly Culinary Foundations 1: Skills) CHRM

CHRM 1210 - Baking Basics - Students learn to apply fundamental baking skills in preparing yeast breads, quick breads, laminated dough, cookies, pies, pastries, cakes, custards, creams, and sauces.

CHRM 2350 - Nutrition - This course orients students to basic nutrition in the context of a modern food service operation. Emphasis is placed on nutrition guidelines for various population groups and disease states to enable the professional to respond knowledgeably to customers' specific nutrition needs. Students apply nutrition principles in developing menus and preparing various meals reflecting current health and dietary guidelines. Students also explore health-centered cooking techniques and prepare meals suitable for common dietary restrictions.

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.

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.

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 start typing in Metropolitan Community College. Most books for the Culinary Arts Foundation 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. 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.

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 2021-2022

Dates	Course	Title	Credits	Times	Days
June 5 – July 8, 2021					
	DESL 0900	Basics of Diesel Mechanics	1.5	8:00-11:00	M, T, W,
July 9	Parent Night			6:00p-8:00p	Th
September – November, 2021					
	DESL 1000	Diesel Preventive Maintenance	4	1:00-4:25	M, W
December, 2021 – February, 2022					
	DESL 1230	Diesel Engine Fundamentals	4	1:00-4:25	M, W
March – May, 2022					
	DESL 1200	Fundamentals of Hydraulics	4	1:00-4:25	M, W
TOTAL CREDIT HOURS - per group			13.5		

Year 2 Student 2021-2022 (students who took 1st year in 2020-2021)

Dates	Course	Course Title	Credits	Times	Days
SUMMER QUARTER 2021					
RECOMMENDED for Career Certificate DDES1:					
	DESL 2200	Steering and Suspension	4.0 credits	2 afternoons / wk	
	WELD 1261	Combination Welding - Automotive	3.0 credits	Welding Department	
TOTAL CREDIT HOURS			7.0		
*OPTIONAL	DESL 2981	Diesel Internship I (with Host Employer from the Industry with pay)	8	As required	
September – November, 2021					
	DESL 1210	Electricity and Electronics	6	1:00-5:45	M, W
December, 2021 – February, 2022					
	DESL 2150	Truck ABS and Brakes	4	1:00-4:25	T,TH
March – May, 2022					
	DESL 1620	Climate Control/Heating and Air Conditioning	4	1:00-4:25	T, TH
TOTAL CREDIT HOURS			14*		
TOTAL CREDIT HOURS AFTER 2 YEARS			27.5*		

Diesel Technology Continued

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. **TOTAL CREDIT HOURS for Year 2 students does not include DESL 2981 Diesel Internship I or recommended classes for career certificate.

4. Shirt(s) will be required; purchase ONLINE. (For 2020-2021 year, cost was \$12.00/shirt)

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). **2020 cost \$708 + tax.**

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 – Preventive Maintenance - This course is the study of truck and equipment preventive maintenance and inspection. Focus will be emphasized in shop tools, equipment and practices to start a career in diesel technology.

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 1620 – Climate Control/Heating and Air Conditioning - *Prerequisite: DESL 1210.* This course is the study of diesel heating, air conditioning, and support systems in-depth. Students troubleshoot and make repairs in the shop with a variety of trucks and equipment.

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.

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

***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.

***WELD 1261 Combination Welding – Automotive** - This course acquaints students with the various welding and cutting techniques applicable to the automotive field.

Diesel Technology Continued

***DESL 2981 – Diesel Internship I** - This internship gives students the needed experience to advance their skills, while working with a qualified mentor in a diesel repair shop or dealership. The experience provides students the opportunity to practice their skills in real life work situations. Applications for internships must be approved by program faculty.

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Digital Cinema and Filmmaking
Elkhorn Valley Campus – 204th & Dodge

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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	PHOT 1500	Moving Image Lab	6	1:00 - 2:30	M, T, W, TH
December, 2021 – February, 2022					
	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
March – May, 2022					
	VACA 2900	Art in Film	4.5	1:00 - 3:00	M, W
	VACA 2130	Video II – Field	4.5	1:00 – 4:00	T, TH
TOTAL CREDIT HOURS			24		

*****Note: VACA 1110 requires: Excellent English grades**

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.

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Early Childhood Education – Seniors Only

24th 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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	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
December, 2021– February, 2022					
	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
March – May, 2022					
	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
		TOTAL CREDIT HOURS	27		

* 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 \$35.00.

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 – 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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	ELTR 1200	Basic Electricity	8	1:00 – 3:00	M, T, W, TH
December, 2021 – February, 2022					
	ELTR 1210	Residential Wiring*	9	1:00-3:00	M, T, W, TH
March – May, 2022					
	ELTR 1220	Commercial Wiring I	9	1:00-3:00	M, T, W, TH
TOTAL CREDIT HOURS			26		

Year 2 Student 2021-2022 (students who took 1st year in 2020-2021)

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	ELTR 2250	Commercial Wiring II	6	1:00-3:00	M, W
December, 2021 – January, 2022					
	ELTR 2331	Electric Services & Transformers	6	1:00-3:00	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
March 10 – May, 2022					
	ELTR 1250	Electric Equipment Controls	6	1:00-3:00	M, W
TOTAL CREDIT HOURS			20		
TOTAL CREDIT HOURS AFTER 2 YEARS			46		

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 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.

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.

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 Technician (EMT) – Seniors Only

South Omaha Campus – 27th & Q – Mahoney Building

Year 1 Student 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	HIMS 1120	Medical Terminology I	4.5	1:00–2:45	T * hybrid
September, 2021 – 1st 5 weeks					
	EMSP 1012	Community Emergency Response Team*	1	1:00–4:00	F
October, 2021 – 2nd 5 weeks					
	EMSP 1000	Cardiopulmonary Resuscitation*	1	1:00–4:00	F
December, 2021 – February, 2022					
	HIMS 1130	Medical Terminology II	4.5	1:00–2:45	T * hybrid
	WORK 1400	Employability Skills	4.5	1:00–3:00	M, W
March – May, 2022					
	EMSP 1100	EMT	12	1:00–4:00	M-F
TOTAL CREDIT HOURS			27.5		

Note: In EMSP 1100 -National Registry Exam -Upon satisfactory completion of the course the student may schedule their National Registry test leading to a license.

* **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:

- EMT 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 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
- Need CPR Card from EMSP 1000 for EMSP 1012 and EMSP 1100
- National Registry Exam test fee will be assessed when the student enrolls in the spring quarter class EMSP 1100 EMT (Fee for 2020-2021 year was \$80.00.)
- Student Liability Insurance Program** fee will be assessed when the student enrolls in the spring quarter class EMSP 1100 EMT (Fee for 2020-2021 year was \$14.50.)
- Fire Department Ride Along fee will be assessed when student enrolls in the spring quarter class EMSP 1100 EMT (Fee for 2020-2021 year was \$25.00.)
- Fire Department FSDAP Ride Along program scheduler fee will be assessed when student enrolls in the spring quarter class EMSP 1100 EMT (Fee for 2020/2021 year was \$15.)
- Background Check fee will be assessed when the student enrolls in the spring quarter class is necessary prior to starting EMSP 1100 EMT (Fee for 2020-2021 year was \$45.00.)
- Drug Testing will be assessed when the student enrolls in the spring quarter class is necessary prior to starting EMSP 1100 EMT (Fee for 2020-2021 year was \$54.00)
- 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.

Emergency Medical Technician Continued

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 1100 – Emergency Medical Technician - This Emergency Medical Technician course provides an introduction to Emergency Medical Care. Modules of training will include medical-legal, roles and responsibilities of the EMT, documentation and communication, human body anatomy and physiology of the major human systems, medical terminology, lifting and moving, airway management basic and advanced, patient assessment, medical and trauma, medical emergencies, treatment, and use of assisted medications and IV maintenance, bleeding control and shock, trauma emergencies, use of immobilization devices, obstetrical emergencies, childbirth, pediatrics and children emergencies, ambulance operations, hazardous materials, mass casualty, and triage. This course consists of 110 didactic hours, 55 hours of lab, and 15 hours of field experience with 5 patient contacts. NOTE: Requirements for this course include a completed application, completed background check form, and proof of current CPR Certification for Healthcare Provider or CPR for the Professional Rescuer. Upon enrollment the National Registry Test Fee, Student Liability Insurance, Fire Department Ride Along fee, Fisdap fee, drug testing fee, and Background Check fee are assessed to the student's account.

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

HIMS 1120 – Medical Terminology I - This course assists students in establishing a solid foundation of medical terminology and abbreviations and introduces prefixes, suffixes, and word roots used in the language of medicine. The course emphasizes medical vocabulary as it applies to the anatomy, physiology, and pathology of the human body. Students study the functioning of the body systems, clinical/surgical procedures, and therapies and examine normal, pathological, clinical, and laboratory considerations in order to best prepare for entrance into the healthcare professions. The course also emphasizes correct spelling and pronunciation.

HIMS 1130 – Medical Terminology II - *Prerequisite: HIMS 1120.* This course is a continuation of HIMS 1120. It presents additional body systems, 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.

WORK 1400 – Employability Skills - This course allows students to enhance their interpersonal skills, improve their ability to work in teams, learn to communicate effectively, think creatively, use problem-solving techniques, and explore competitive job-seeking strategies.

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.

Juniors 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	FIST 1000	Principles of Emergency Services	3	12:30-3:30	TU
	FIST 1020	Fire Behavior & Combustion	4	12:30-3:30	WE
December, 2021 – February, 2022					
	FIST 1060	Occupational Safety & Health for Emergency Services	3	12:30-3:30	TU
	FIST 2040	Principles of Fire & Emergency Services Safety & Survival	3	12:30-3:30	WE
March – May, 2022					
	FIST 1070	Fire Protection Systems	3	12:30-3:30	TU
	FIST 2020	Fire Prevention, Inspection & Codes	4	12:30-3:30	WE
		TOTAL CREDIT HOURS	20		

Seniors 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	FIST 2030	Legal Aspects of Emergency Services 3	3	12:30-3:30	TU
	FIST 2000	Incident Command System	3	12:30-3:30	WE
December, 2021 – February, 2022					
	FIST 1050	Building Construction for Fire Protection	3	12:30-3:30	TU
	FIST 2010	Fire Investigation I	3	12:30-3:30	WE
March – May, 2022					
	FIST 2900	Selected Topics in Fire Science*	3	12:30-3:30	TU
	FIST 2050	Introduction to Fire & Emergency Services Administration	3	12:30-3:30	WE
		TOTAL CREDIT HOURS	18		
		TOTAL CREDIT HOURS AFTER 2 YEARS	38		

GRADUATION SUMMER – any senior who completes year one and is 18 by the start of the class will be guaranteed a spot in FIST 1090. 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	5:00-9:00p 8:30-3:00p	WE SAT
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FIST 2900 is not part of the FSAAS degree but is required

Students must receive passing grades in order to remain in the academy.

**** must be 18 years or older by June in order to take FIST 1090 (Firefighter I).**

Fire Science Continued

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 1020 – Fire Behavior & Combustion - This course explores the theories and fundamentals of how and why fires start, spread, and are controlled. Topics include fundamental laws of chemistry, states of matter, gas laws, chemical bonding, and thermodynamics with applications to various industrial processes.

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 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 2900 – Selected Topics in Fire Science* - This course provides students with practical instruction and lab demonstration in all areas of a Fire Fighting Career without placing them in an Immediately Dangerous to Life or Health Situation (non-IDLH). Such practical instruction and lab demonstration will include: Search & Rescue Techniques; Use of Portable Fire Extinguishers; PPE; Ropes & Knot Tying; Use of Fire Hose, Nozzles and Appliances; Salvage & Overhaul Procedures; Tools & Equipment; and Ladders. Upon enrollment, Student Liability Insurance fees are assessed to the student's account.

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**

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Full Stack Web Development
Fort Omaha Campus – 30th and Fort

This program is designed to teach students HTML5, CSS, and basic computer development concepts such as flow control and object-oriented programming concepts. Students gain the knowledge and skills of the essential elements of web application development (i.e. Full Stack Web Development). This program prepares students for employment as entry-level web application developers.

Year 1 Student 2021-2022 (High School Web Development Level I Career Certificate)

Dates	Course	Title	Credits	Times	Days
June – August 2021					
	INFO 1001	Introduction to Information Literacy	4.5	Online/Remote Delivery	
September – November 2021					
	INFO 1003	Problem Solving and Programming Logic	4.5	1:00 – 3:00	W
	INFO 1311	Web Page Creation	4.5	1:00 – 3:00	TH
December, 2021 – February, 2022					
	INFO 1521	Java Programming I	4.5	1:00 – 3:00	W
	INFO 1325	Software Engineering Foundation I	4.5	1:00 – 3:00	TH
March – May, 2022					
	INFO 1620	Introduction to Database Design	4.5	1:00 – 3:00	W
	INFO 1335	Software Engineering Foundations II	4.5	1:00 – 3:00	TH
TOTAL CREDIT HOURS			27		

Year 2 Student 2022-2023 (students who took 1st year in 2021-2022)
(High School Web Programming Level II Career Certificate)

Dates	Course	Title	Credits	Times	Days
September – November 2022					
	INFO 1531	Java Programming II	4.5	1:00 – 3:00	W
	INFO 2124	JavaScript I	4.5	1:00 – 3:00	TH
December, 2022 – February, 2023					
	INFO 1541	Java Programming III	4.5	1:00 – 3:00	W
	INFO 1134	React	4.5	1:00 – 3:00	TH
March – May, 2023					
Choose Two from the List Below:					
	INFO 2134	React Native	4.5	1:00 – 3:00	M
	INFO 2439	Mobile Application Development (Flutter)	4.5	1:00 – 3:00	TH
	INFO 2981	Internship	4.5		
	INFO 2991	Full-Stack Capstone/Internship	4.5		
TOTAL CREDIT HOURS			27		
TOTAL CREDIT HOURS AFTER 2 YEARS			54		

Full Stack Web Development 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 1001 - Introduction to Information Literacy - This course is designed to illustrate what it means to be digitally literate and to demonstrate what can be accomplished using a computer. Topics include hardware, software, operating systems, peripherals, and troubleshooting. Skills or working in an Internet or networked environment and for maximizing your communication, education, collaboration, and social interaction in a safe and ethical way is also discussed in the course. Students will also learn to use popular software application programs to process documents found in a business or school environment. The course is aligned with the IC3 Digital Literacy Certification.

Note: A basic understanding of computer systems is recommended prior to taking this course. Students desiring to take a basic introductory computer course should enroll in WORK 0900 Introduction to Microcomputer Technology.

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 1134 – 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 1311 - Web Page Creation - This course teaches students how to create basic websites using HTML and CSS specifications. It covers creating HTML pages that include links, images, tables, multimedia, and forms and discusses additional advanced features such as implementing Web interactivity using JavaScript and jQuery. Students use CSS to control the format and layout of Web pages and learn how to use responsive design for print, mobile devices, and tablets.

INFO 1325 - Software Engineering Foundation I - Students explore the tools, techniques, and processes used for software engineering, development and deploying. Students are introduced to version management tools and techniques using the Command Line interface to interact with development tools. Students are also introduced to team-based development concepts.

INFO 1335 - Software Engineering Foundations II - *Prerequisites: INFO 1003, INFO 1325, INFO 1521, and INFO 2124 — must be completed prior to taking this course.* Students explore software engineering concepts including project management and software architecture, design methodologies, and software testing practices in a collaborative development environment.

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.

Full Stack Web Development Continued

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 1541 - Java III - *Prerequisites: INFO 1003, INFO 1521, INFO 1531 must be completed prior to taking this course.* Students build on the basics of Java to create the backend of a web application. Frameworks are used alongside Java to enable dependency injection and database access. Students use the Application Programming Interface (API) for each framework covered in the course. Concepts covered are Model, View, Controller (MVC), Dependency Injection, Servlets, Containers, and Version Control for industry level backend development.

INFO 1620 - Introduction to Database Design - *Prerequisite: INFO 1003 must be completed prior to taking this course.* 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 2124 - JavaScript I - *Prerequisites: INFO 1003 and INFO 1311 must be completed prior to taking this course.* Students learn basic data structures and methods used to work with JavaScript on the client side as well as on the server side.

INFO 2134 – React Native Mobile Development - Students learn client-side JavaScript, outlining basic data structures and methods used to work with JavaScript on the client side as well as on the server side. Students build on concepts introduced in JavaScript I. Students are also introduced to a modern front-end framework and will learn to build engaging mobile apps using React Native, a JavaScript framework that integrates directly with mobile platforms.

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

INFO 2981 – Internship - The internship provides students with the opportunity to apply their knowledge, learn new techniques, and get on-the-job training at approved work sites. Interested students must contact their faculty advisors to develop internships to meet their academic and career goals. Based on state guidelines, students must complete 40 hours of work for each credit hour.

INFO 2991 – Full-Stack Capstone/Internship - Students integrate skills and knowledge acquired throughout the Full-Stack Web Development curriculum in developing, managing, and executing a web application project from concept to completion. NOTE: This course should be taken during the final quarter of the degree program. This course is offered in the fall and spring quarter.

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Google IT Support Professional
Fort Omaha Campus – 30th and Fort

The Google IT Support Professional Certificate is a hands-on, online program designed to prepare beginner learners for entry-level jobs in IT Support upon completion of the certificate, or continued education in the field. The program is exclusively developed by Google and covers all the fundamentals of IT support, including troubleshooting, customer service, networking, operating systems, system administration, and security.

Year 1 Student 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November 2021					
	INFO 1000	Workplace Skills Technology	4.5	1:00 – 3:00	M, W
	INFO 1022	IT Support Fundamentals	4.5	1:00 – 3:00	T, TH
December, 2021 – February, 2022					
	INFO 1030	Computer Networking and Desktop Support	4.5	1:00 – 3:00	M, W
	INFO 1135	Operating Systems Management For Desktop Support	4.5	1:00 – 3:00	T, TH
March – May, 2022					
	INFO 2261	System Administration and IT Infrastructure Services	4.5	1:00 – 3:00	M, W
	INFO 2942	IT Security for Desktop Support	4.5	1:00 – 3:00	T, TH
TOTAL CREDIT HOURS			27		

Course Descriptions

INFO 1000 – Workplace Skills Technology - Students experience multiple opportunities to apply Nebraska Career Readiness Standards including developing interpersonal skills, working in teams, practicing effective communication skills, and utilizing problem-solving techniques. Students gain knowledge in establishing a personal brand, skills in networking, and develop a professional career portfolio including an industry-specific resume, work projects, and accomplishments. Students learn IT industry work expectations and job search strategies. (Cross-listed as WORK 1400)

INFO 1022 – IT Support Fundamentals - Students will study the concepts, standards, and practices to prepare them for a role as an entry-level IT Support Specialist. Students focus on topics such computer hardware concepts, the internet, computer software, troubleshooting, and customer service fundamentals.

INFO 1030 – Computer Networking and Desktop Support - This course provides students with insight to networking concepts most often associated with the IT support desk function. Students focus on topics such as the TCP/IP model, commonly used protocols, network troubleshooting strategies, and providing support for cloud-based products.

INFO 1135 – Operating Systems Management for Desktop Support - This course provides students with the knowledge and skills to effectively perform critical tasks essential to manage software, users, and hardware. Topics include overviews of the Windows and Linux operating systems, installation and configuration tasks, and user account creation and maintenance.

INFO 2261 – System Administration and IT Infrastructure Services - Students study concepts associated with providing support across an enterprise network. Students will master common tasks associated with maintaining computer systems in a multi-user environment such as server configuration, computer and user management, and user productivity. Students will also study concepts associated with cloud computing and managing cloud resources.

Google IT Support Professional Continued

INFO 2942 – IT Security for Desktop Support - During this course, students examine a wide variety of security topics, tools, and best practices. Topics covered include security threats, attacks, tools, and hardware used to secure networks. Other topics include encryption, safeguarding data, and authentication/authorization/accounting services. Students will demonstrate knowledge of information security concepts through the creation of a multi-layered security architecture.

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

The Heating, Air Conditioning and Refrigeration (HVAC) program covers all aspects of installing, troubleshooting and servicing heating, ventilating and 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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November 2021					
	HVAC 1101	HVACR Electrical Systems & Components	8.0	1:00 – 3:00	M-TH
December, 2021 – February, 2022					
	HVAC 1102	HVACR Shop Practices	6.0	1:00 – 3:00	M-TH
March – May, 2022					
	HVAC 1103	Introduction to HVACR Principles & Theory	8.0	1:00 – 3:00	M-TH
TOTAL CREDIT HOURS			22		

Year 2 Student 2021-2022 (students who took 1st year in 2020-2021)

Dates	Course	Title	Credits	Times	Days
September – November 2021					
	HVAC 1201	Heating System Fundamentals	8	1:00 – 3:00	M-TH
December, 2021 – February, 2022					
	HVAC 1202	Commercial Refrigeration Installation & Service	8	1:00 – 3:00	M-TH
March – May, 2022					
	HVAC 1104	Sheet Metal Fundamentals 1 (1 st 5 weeks)	4.5	1:00 – 3:00	M-TH
	HVAC 2604	Sheet Metal Fundamentals 2 (2 nd 5 weeks)	4.5	1:00 – 3:00	M-TH
TOTAL CREDIT HOURS			25		
TOTAL CREDIT HOURS AFTER 2 YEARS			47		

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.

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.

HVACR Technology Continued

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 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 2604 - Sheet Metal Fundamentals 2 - Students learn how to properly size and run ductwork, how to use an air duct calculator, and to seal, insulate and pressure-test ductwork. Students practice building plenums onsite and installing flexible ductwork.

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.

Horticulture, Land Systems and Management

Fort Omaha Campus – 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 2021-2022

Dates	Course	Title	Credits	Times	Days
September 2021 – November 2022					
	HLSM 1010	Introduction to Horticulture	6	1:00 – 3:00	M-TH
December, 2021 – February 2022					
	HLSM 2430	Plant Physiology	4.5	1:00 – 3:00	MTW
	HLSM 1000	HLSM Orientation	1	1:00 – 3:00	TH
March – May 2022					
	HLSM 1120	Pomology	3	1:00 – 3:00	M, W
	HLSM 1350	Turfgrass and Landscape Maintenance	3	1:00 – 3:00	T, TH
TOTAL CREDIT HOURS			17.5		

Year 2 Student 2022-2023 (students who took 1st year in 2021-2022)

Dates	Course	Title	Credits	Times	Days
September 2022 – November 2023					
	HLSM 1100	Perennials	3	1:00 – 3:00	M, W
	HLSM 2425	Entomology	3	1:00 – 3:00	T, TH
December, 2022 – February 2023					
	HLSM 2410	Plant Propagation	3	1:00 – 3:20	M, W
	HLSM 1030	Intro to Floral Design	3	1:00 – 3:20	T, TH
March – May 2023					
	HLSM 1050	Intro to Landscape Design	3	1:00 – 3:20	M, W
	HLSM 2510	Olericulture	3	1:00 – 3:20	T, TH
TOTAL CREDIT HOURS			18		
TOTAL CREDIT HOURS AFTER 2 YEARS			35.5		

COURSE DESCRIPTIONS

HLSM 1000 – HLSM Orientation – This course is an introduction to the horticulture land systems management program (HLSM). Students seeking an associate's degree, certificate of achievement or career certificate in the HLSM program should take this course during the first quarter of enrollment.

HLSM 1010 – Introduction to Horticulture - This course forms the basis for all the other horticulture courses. It includes the study of structures and functions in plants; requirements for growth and production, including soil and fertilizers, temperature, light, growth stimulants and retardants, and water use and application; propagation; and growing problems as they relate to the production of vegetables, bedding plants, bulbs, nursery stock, potted plants, and cut flowers. Hands-on laboratory experience is provided.

Horticulture, Land Systems and Management Continued

HLSM 1030 - Introduction to Floral Design - Students explore the basic skills, mechanics, artistry, and career possibilities present in the professional floral design industry. Students apply design techniques and use materials common to the field to produce floral arrangements for various events. Students will design and decorate with cut flowers, potted plants and permanent botanicals.

HLSM 1050 - Introduction to Landscape Design - Students are introduced to the areas involved in planning, designing and drawing landscapes including the proper use of drafting equipment and technology. This course covers the basics of sites and site maps, how to draw maps, the tools to use and how to perform basic site analysis.

HLSM 1100 - Perennials: Culture and Identification - This course studies perennials in the landscape focusing on perennials of the Midwest and Nebraska natives. Emphasis is placed on culture, flower/leaf morphology, texture, color, proper location, soil and blooming periods.

HLSM 1120 - Pomology: Culture and Identification - Students identify fruit and fruit bearing plants of the region by their common and botanical names. Students will evaluate fruit and fruit products from a marketing and sales perspective and investigate different methods of preparation and preservation of product. Students will also learn the cultural and physical care requirements for those plants and use the information to create a planting and maintenance plan for a project site.

HLSM 1350 - Turfgrass & Landscape Maintenance - Students will learn how to maintain turfgrass areas and landscape beds. Students will learn how to use and properly maintain the tools used in turfgrass and landscape maintenance. Students will learn how to properly calculate mulch, fertilizer and soil requirements and how to properly plant a variety of plant materials. Students will learn how to cost out a maintenance project.

HLSM 2410 - Plant Propagation - This course covers the principles and practices of plant propagation. Emphasis is placed on the importance of clones/cultivars that are maintained by seed and vegetative means. Students study the physiological development of plants from seed to maturity and the many ways to propagate them in these stages. The course also offers hands-on introduction to these propagation techniques as well as learning the wide range of plants that are propagated in each area.

HLSM 2425 – Entomology - This course examines detection, identification, and control of insects that damage ornamental plants. Identifying insect characteristics, life cycles, and IPM control methods are examined.

HLSM 2430 - Plant Physiology - This is an introductory course studying plant morphology and physiology of herbaceous and woody plant divisions within the plant kingdom.

HLSM 2510 – Olericulture - Students learn about food systems through cultivating a diverse vegetable garden. Emphasis is placed on organic and biodynamic management practices.

IT Technician
Fort Omaha Campus –30th and Fort

The certificate’s curriculum directly aligns to the following IT industry certifications: CompTIA IT Fundamentals+, CompTIA A+, Microsoft Desktop Associate (MDA), and Cisco Certified Network Associated (CCNA):

Year 1 Student 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November 2021					
	INFO 1002	Introduction to Information Technology	4.5	1:00 – 3:00	M
	INFO 1200	Cisco Introduction to Networks	4.5	1:00 – 3:00	T
December, 2021 – February, 2022					
	INFO 1105	IT Essentials PC Repair I	4.5	1:00 – 3:00	M
	INFO 1201	Cisco Switching, Routing, and Wireless	4.5	1:00 – 3:00	T
March – May, 2021					
	INFO 1125	IT Essentials PC Repair II	4.5	1:00 – 3:00	M
	INFO 2220	Cisco Enterprise Networking, & Security	4.5	1:00 – 3:00	T
TOTAL CREDIT HOURS			27		

Year 2 Student 2021-2022 (students who took 1st year in 2020)

Dates	Course	Title	Credits	Times	Days
September – November 2022					
	INFO 1110	Windows Operating Systems I	4.5	1:00 – 3:00	M, W
	INFO 2225	CCNA Security	4.5	1:00 – 3:00	T, TH
December, 2022 – February, 2023					
	INFO 1120	Windows Operating Systems II	4.5	1:00 – 3:00	M, W
	INFO 1111	Linux Operating Systems I	4.5	1:00 – 3:00	T
March – May, 2023					
	INFO 2806	Network Attacks, Intrusions, and Penetration Testing	4.5	1:00 – 3:00	T, TH
TOTAL CREDIT HOURS			22.5		
TOTAL CREDIT HOURS AFTER 2 YEARS			49.5		

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.

IT Technician Continued

COURSE DESCRIPTIONS

INFO 1002 - Introduction to Information Technology - Students examine the role of information technology in organizations including fundamentals of hardware and software, logical problem-solving techniques, creating secure environments, database fundamentals and the integration of web technologies. Students conduct a skills gap analysis and create career plan.

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 1120 – Windows Operating Systems II - *Prerequisite: INFO 1110.* Students learn fundamental concepts of effective use and management of the Microsoft Windows desktop operating system. This course continues the exploration of the Microsoft Windows desktop operation system from an administration perspective. Course objectives align with objectives of the Microsoft Desktop Administrator Associate certification.

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 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 1125 - IT Essentials PC Repair II - *Prerequisite: INFO 1105 must be completed prior to taking this course.* Students experience advanced, hands-on topics of hardware and software repair. Students conduct basic electronic trouble shooting, wireless networking, and system security. Through hands-on activities, students learn configuration procedures and more advanced trouble shooting procedures. Topics of discussion and written labs include printers, mobile devices, and wireless operations. This course further prepares students for the 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 1201 – Cisco Introduction to Networks - *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.

IT Technician Continued

INFO 2200 – Cisco Enterprise Networking, Security, and 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 2225 – CCNA Security - *Prerequisite: INFO 2220*. Students learn basic security concepts and apply them to realistic scenarios given a set of specifications. Students will develop and apply advanced configurations for routers and switches enabling enhanced security. By the end of this course, students will configure and troubleshoot routers, switches, and firewalls to provide a secure network for data transmission. Students will develop a network security policy and implement the policy through a secure network design.

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.

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Pre-Apprenticeship Plumbing

Fort Omaha Campus – 30th and Fort – 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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	PLBG 1010	Introduction to Plumbing	9	1:00 – 3:00	MTWTH
December, 2021– February, 2022					
	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
March – May, 2022					
	PLBG 1030	Basic Commercial Plumbing	9	1:00 – 3:00	MTWTH
TOTAL CREDIT HOURS			29		

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.

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Prototype Design

Fort Omaha Campus – 30th and Sorensen – Center for Advanced and Emerging Technology

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 2021-2022

Dates	Course	Title	Credits	Times	Days
September - November 2021					
	WIDX 1000	Intro to Prototype Design	4.5	1:00-3:00	M, W
	WIDX 2900	Special Topics in Prototype Design	4.5	1:00-3:00	T, TH
December 2021 – February 2022					
	WIDX 1105	Digital Electronics in Prototyping	4.5	1:00 - 3:00	M, W
	WIDX 1210	Prototyping with SolidWorks	4.5	1:00 - 3:00	T, TH
March - May 2022					
	WIDX 1225	How to Build Almost Anything	4.5	1:00 - 3:00	M, W
	WIDX 1320	Intermediate SolidWorks	4.5	1:00 - 3:00	T TH
TOTAL CREDIT HOURS:			27		

Year 2 Student 2021-2022 (students who successfully completed 1st year classes)

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

WIDX 2900 – Special Topics in Prototype Design - In a world that is increasingly changing, this course is designed to offer special topics in prototype design that is not currently covered in workforce curriculum. This hands-on course is built around student-designed projects.

WIDX 1000 – Introduction to Prototype Design - Explore the fundamentals of prototype design. Study the three integrated concepts of: design thinking, business acumen, and low-volume production to ideate, prototype and manufacture a human-centered product. Compare careers and occupations that require prototyping skills. This course includes a Tape and Rule Measurement Certification and an Occupational Safety and Health Administration (OSHA) Certification. Additional cost of \$100 for project materials and certifications.

WIDX 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.

Prototype Design Continued

WIDX 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.

WIDX 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.

WIDX 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.

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

Theatre Technology
The Omaha Community Playhouse – 6915 Cass

This program allows students to gain necessary skills to work behind-the-scenes in theatre doing costuming, scenery, lighting, or sound. Students accepted into the Theatre Technology Apprenticeship program are expected to spend at least 15 hours per week in training. The Theatre Technology Apprenticeship program is a two-year program run in conjunction with the Omaha Community Playhouse.

Year 1 Student 2021-2022

Dates	Course	Title	Credits	Times	Days
September – November, 2021					
	THEA 1110	Theatre Technology I	4	2:30 - 4:25	M-F
	THEA 2981	Cooperative Study I	4	TBA	M-F
December, 2021 – February, 2022					
	THEA 1120	Theatre Technology II	4	2:30 - 4:25	M-F
	THEA 2982	Cooperative Study II	4	TBA	M-F
March – May, 2022					
	THEA 1130	Theatre Technology III	4	2:30 - 4:25	M-F
	THEA 2983	Cooperative Study III	4	TBA	M-F
TOTAL CREDIT HOURS			24		

Year 2 Student 2021-2022 (students who took 1st year in 2020-2021)

Dates	Course	Title	Credits	Times	Days
June – July, 2021					
	THEA 2150	Stage Rigging	4.5	5:15 - 9:45	MW
September – November, 2021					
	THEA 2160	Principles of Stage Lighting	4.5	5- 9 PM	TBA
	THEA 2984	Cooperative Study IV	4	TBA	TBA
December, 2021 – February, 2022					
	THEA 2985	Cooperative Study V	4	TBA	TBA
March – May, 2022					
	THEA 2986	Cooperative Study VI	4	TBA	TBA
TOTAL CREDIT HOURS			21		
TOTAL CREDIT HOURS AFTER 2 YEARS			45		

Theatre students need to interview with Apprenticeship Coordinator. Call 402-661-8518 to set up that appointment.

- After completing the courses listed in the Year 1 program, students will have satisfied the requirements for a Career Certificate in Theatre Technology (THETD).
- By taking 13.5 credits of Gen Ed (ENGL, MATH, and Humanities), students will have satisfied the requirements for the Certificate of Achievement in Theatre Technology (THETC) after Year 2 of the program. Ideal times to take those Gen Ed courses would be summer quarter between Year 1 & 2 as well as the fall quarter of Year 2.
- As a reminder, by taking all the courses listed on the previous pages the student (apprentice) will receive an Omaha Playhouse Certification of Skills, the THETD Career Certificate and the THETC Certificate of Achievement if the Gen Ed requirements are met.

Theatre Technology Continued

COURSE DESCRIPTIONS

THEA 1110 – Theatre Technology I - Beginning and experienced students learn the basic arts and crafts of technical theatre in a professional theatre environment. The course includes overviews of the procedure and safety issues and practices set construction, lighting, and costume. It is a prerequisite for admission to the certified Theatre Technology Apprentice program offered through the Omaha Community Playhouse.

THEA 1120 – Theatre Technology II - *Prerequisite: THEA 1110.* Students continue work begun in THEA 1110 with focus on real work situations and experiences. Topics include overview and practice in properties, scenic painting, and sound design and support. Students also begin work in their chosen areas of emphasis. These areas include sound, lights, construction, scenic painting, costume, props, stage management, box office, and house management.

THEA 1130 – Theatre Technology III - *Prerequisite: THEA 1120.* Students continue the work begun in THEA 1110 and 1120 with focus on real work situations and experiences, continuing their rotation within their selected artistic areas of emphasis. These areas include sound, lights, construction, scenic painting, costume, props, stage management, box office and house management. Students begin the process of career development through the creation of professional materials, such as resumes and portfolios.

THEA 2150 – Stage Rigging - *Prerequisite: THEA 1110.* The course builds on concepts and skills introduced in Theatre Technology I with specific emphasis on stage rigging. It covers rigging topics, including repair and maintenance, motorized rigging, trussing, and special applications in the lecture portion and reinforces them during labs under non-production conditions. Students apply fundamental skills in the installation of flying scenery, as well as use of stage rigging equipment under show conditions.

THEA 2160 – Principles of Stage Lighting - *Prerequisite: THEA 1110.* This course builds on concepts and skills introduced in THEA 1110 with specific emphasis on stage lighting. It covers lighting topics, including wiring and repair of electrical cables, basic color theory, and refraction principles in the lecture portion and reinforces them during labs under non-production conditions. Students apply fundamental skills in light console operation and temporary installations of lighting systems under show conditions.

THEA 2981, 2982, 2983, 2984, 2985, 2986 – Cooperative Study I, II, III, IV, V, VI - The Cooperative Study courses are special cooperative education experiences with the College and the Omaha Community Playhouse. The student works a minimum of 165 hours per quarter in conjunction with the Playhouse and its staff. Students who successfully complete this course sequence receive an apprentice certificate.

Welding and Fabrication Technology

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

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 2021-2022

Dates	Course	Title	Credits	Times	Days
September – October, 2021					
	WELD 1100	Industrial Cutting Processes	3	1:00-3:10	M, T, W, TH
October - November, 2021					
	WELD 1300	Oxy Fuel Welding	3	1:00-3:10	M, T, W, TH
December, 2021 – January, 2022					
	WELD 1500	Shielded Metal Arc Welding (SMAW)	3	1:00-3:10	M, T, W, TH
January – February, 2022					
	WELD 1200	Gas Metal Arc Welding (MIG) - Steel I	3	1:00-3:10	M, T, W, TH
December – February, 2022					
	WELD 1910	Special Topics in Welding-Skills USA Training I	1	1:15-2:45	F
March – April, 2022					
	WELD 1400	Gas Tungsten Arc Welding (GTAW) - Steel 1	3	1:00-3:10	M, T, W, TH
April - May, 2022					
	WELD 1700	Introductory Fabrication	3	1:00-3:10	M, T, W, TH
		TOTAL CREDIT HOURS	19		

Year 2 Student 2021-2022 (students who took 1st year in 2020-2021)

Dates	Course	Title	Credits	Times	Days
September – October, 2021					
	WELD 2200	Gas Metal Arc Welding (MIG)	3	12:00-4:20	M, T, W, TH
October - November, 2021					
	WELD 1410	Gas Tungsten Arc Welding (TIG)	3	12:00-4:20	M, T, W, TH
December, 2021 – January, 2022					
	WELD 1510	SMAW (Stick) - Vertical	3	12:00-4:20	M, T, W, TH
January – February, 2022					
	WELD 2500	SMAW (Stick) - Horizontal	3	12:00-4:20	M, T, W, TH
March – April, 2022					
	WELD 2510	SMAW (Stick) - Overhead	3	12:00-4:20	M, T, W, TH
April - May, 2022					
	WELD 1420	Gas Tungsten Arc Welding (TIG)	3	12:00-4:20	M, T, W, TH
		TOTAL CREDIT HOURS	18		
		TOTAL CREDIT HOURS AFTER 2 YEARS	37		

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.