

Central Campus

Central Campus complements and extends the programs of Central Iowa Schools, offering unique academic and career opportunities that direct, inspire, and motivate a diverse group of students.

Central Campus serves as the Premier Regional Academy within the Des Moines Public Schools. Over two thousand students from dozens of Iowa High Schools experience our Advance Career Training Programs. With academic planning and support in high school, students have the opportunity to earn community college credit and two-year Associates Degree at no extra cost.

Located at the heart of the model district for urban education, Central Campus offers hands on, real world work-based educational programs to a highly diverse community and surrounding areas. One of our greatest strengths is the friendships and networking of students from diverse backgrounds and communities. Des Moines Public Schools dedicates itself to excelling at unique and technologically advanced opportunities for all learners. Central Campus commits itself to providing equal access and prospects through rigorous academic and career training experiences for all.

Requests for Central Campus courses begin with inquiries made through your home high school counselor or scheduling contact. You are also welcome to call Central Campus at 515-242-7676. Central Campus is open to all qualifying high school students regardless of home district. Criteria for enrollment in Central Campus programming with requests exceeding capacity is as follows: the student expresses strong interest in a career path, is credited as a junior or senior (does not apply to courses designed for sophomores or three-year programs), has met prerequisites at their home high school, is on track to graduate, has a strong attendance record, demonstrates strong citizenship skills, and enrollment would increase opportunities for underserved populations. No one indicator is a deciding factor in enrollment. Students not meeting these criteria may work with their counselor and school administrator to seek an exception. Students wishing to request a program at Central Campus need to complete the form found at <http://fs8.formsite.com/DMPSchools/CCI920/index.html> for any and all programs they are interested in pursuing at Central Campus.

For additional information about Central Campus, please talk with your school counselor and visit <http://centralcampus.dmschools.org>

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Central Campus Courses and Programs of Study

Communication Media Academy

Broadcasting & Film (MDA363/364, MDA463/464)

The Broadcasting & Film Department at Central Campus is a dynamic, two-year program which concentrates on the creative and communication aspects of the radio/television/film industry. Emphasis is placed on analysis of career paths and the production techniques associated with gainful employment. Considerable time is spent working on the craft of writing, reading, equipment operation, announcing, creative thinking and management skills. The program may include studio assignments in the FCC-licensed radio station, KDPS 88.1 FM (and streaming live online: kdpscentral.streamon.fm), or submission of film and television projects to DMPS-TV. Students also have the opportunity to submit work to various contests and festivals, such as the Wild Rose Film Festival, 48 Hour Film Festival, Iowa Motion Pictures Association Film Festival, Cedar Rapids Film Festival and John Drury Radio Awards. Projects may be submitted to colleges and universities in pursuit of scholarships in the area of Broadcasting & Film.

Prerequisites: None

Commercial Photography (ART319/320, LA421/422)

In the Commercial Photography program, students obtain skills in film processing, darkroom procedures, studio shooting techniques, camera techniques, photographic history, presentation skills and digital imaging. Portfolio development enables students to apply for employment, scholarships and college admission. Students will publicly display work at the Central Campus Student Art Exhibit and other exhibitions. It is recommended, but not required, that students have a 35mm film camera with manual options.

Prerequisites: ART186

Graphic Communications (ART361/362, 461/462, 469/470)

Graphic Communication provides education, training and real world graphic design and print production experiences. Through close relationships with industry experts, the program's curriculum and industry experiences reflect the technological expectations of the graphic communication industry. First-year students complete a wide variety of hands-on projects in design, pre-press, print production, and bindery. Participation in frequent industry tours allows students to increase the range and depth of their understanding. All students enrolled in the second year of the program are expected to complete a variety of increasingly complex project work. They also are expected to participate in the design, layout and production of various "live jobs." Both the "live jobs" and the projects are intended to further develop their skills and overall understanding of the graphic communication industry. Second-year students may choose the privilege of participating in job-shadow and internship experiences. Job shadowing and internships provide a stronger foundation and background for the advanced student desiring to enter the industry. For students planning to continue their postsecondary education, these foundational experiences provide the opportunity to earn additional college credit.

Prerequisites: Two courses in any of the following areas highly recommended: Art, Graphic Design, Computer Applications, Journalism, and Technology Education.

Education & Leadership Academy

Army JROTC (MIS173/175, MIS273/275, MIS373/374, MIS473/475)

Army JROTC teaches students the value of citizenship, leadership, service to the community, and personal responsibility. The program promotes a sense of accomplishment, while instilling self-esteem, teamwork, and self-discipline. JROTC's focus is reflected in its mission statement, "Motivating young people to be better citizens." The program prepares students for responsible leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens.

JROTC is a stimulus for promoting graduation from high school, and it provides instruction and rewarding opportunities that will benefit the student, community, and nation. Students participate in a regular physical education classes as part of the JROTC program.

Criminal Justice (CJT461/462)

The Criminal Justice program gives students the opportunity to explore careers in police work, criminal law, crime scene investigation, and other related vocations. Faculty works closely with the Des Moines Police Department and Polk County Sheriff's Office to provide authentic experience in a vibrant law enforcement community. Students participate in mock crime scene scenarios and job shadowing professionals.

Early Childhood Careers (FCS325/326, FCS425/426)

The Early Childhood Careers program prepares students to work with children from infancy to eight years of age. Students combine classroom instruction with practicum experiences in child care centers, Head Start programs, and elementary schools. Successful completion of the second year of the program enables students to earn a national credential, Child Development Associate. Students complete the training required by the Iowa Department of Human Services for persons working in childcare centers. Upon completing this program, they can find employment in childcare centers or may choose to further their studies in elementary or early childhood education. CPR training is offered with this course.

Prerequisites: Child Development recommended

Sports Officiating and Leadership (PHY327/328)

In Sports Officiating and Leadership, students become IHSA and IHSGAU certified officials in a variety of sports. They will have film study through industry-leading Hudl software to understand theories and movements of the sport to better understand rules and positioning. Along the way, they will have live on site training in cooperation with the other programs located in our facility performing "intermural" sports to gain experience and practice in live game situations. After students earn certification with the state of Iowa they will be placed in jobs within the DMPS District to start earning money as a fully certified official. Throughout class students will prepare business cards and develop an officiating philosophy for work after class ends. This is a great opportunity, for young adults, to gain confidence and job experience in a field they can do for the rest of their life. CPR training is offered with this course.

Urban Leadership Academy (TAC320)

Urban Leadership is committed to empowering students on their journey to becoming community-based activists and entrepreneurs. Based in the principles of hip-hop culture, students engage in an in-depth study of social movements shaping history and urban settings across the United States. Through the use of various mediums such as the written and spoken word, performance-based literacy, urban arts, and youth + community summits, and internships, students are given a platform to become the leaders of today. The objective is to provide students with in-depth knowledge regarding social movements shaping US History, equipping them with the leadership skills necessary to becoming change agents in their local communities. This course includes one semester of Digital Media. Students will earn elective high school English credit with this course.

Prerequisites: Strong interest in Social Justice and the Urban Arts.

Urban Teacher Academy (TAC341/342)

Students learn first-hand elementary, middle school, or high school career expectations and experiences through the Urban Teacher Academy. They acquire extensive field experience through tutoring, field trips, and classroom observations. There is also time set aside for internships with master teachers and guest speakers who are experts in the field of education. Students

also visit colleges and universities to gain insight into the post-secondary option that might be best for them. This program provides an excellent foundation and transition to the teacher education programs of four-year liberal arts institutions. Students will earn elective high school English credit with this course.

Prerequisites: Must pass with a C- or higher to continue in the program.

Engineering Academy

Computer Aided Design Technology

This program provides occupational and technical skills for job entry in manufacturing and construction or college entrance in the fields of engineering, design, and architecture. You will be introduced to principles and practices, engineering/construction/manufacturing standards, and the use of references and technical information. In this program students design, document, and build their activities using industry leading software and equipment. Participation in a student organization is encouraged and industry software certifications are available.

The Computer Aided Design Technology program is a two or four semester career area that provides students with the occupational and technical skills for job entry in manufacturing and construction or college entrance in the fields of engineering, design, and architecture.

The engineering/manufacturing curriculum of this course emphasizes principles and practices, engineering standards and the use of references and technical information for production of manufactured goods. Industry based 2D and 3D computer aided design skills will be taught, as well as introduction to computer aided machining (CAM) and computer aided coordinate measuring (CMM). Rapid prototyping will be integrated with the use of multiple types of 3D printers and computer numerically controlled (CNC) equipment.

The architectural curriculum of this course emphasizes design studies and technical information, and the production of construction drawings. Interior design, landscape design and the development and study of energy efficient housing is incorporated in the curriculum to prepare students for changes in the housing industry. 2D and 3D computer aided design skills in architecture and construction industries are practiced and critiqued by professionals. Model building is used to improve visualization skills.

Industry leading software packages learned and used include Autodesk products: AutoCAD, Inventor, Revit; Dassault Systems Solidworks, and CNC Software Inc. Mastercam. Software certified user certifications are available.

Prerequisites: Mechanical/architectural drafting/design recommended.

Civil Engineering & Architecture (EGR508)

Civil Engineering and Architecture emphasizes design studies and technical information, and the production of construction drawings. Interior design, landscape design and the development and study of energy efficient housing is incorporated in the curriculum to prepare students for changes in the housing industry. 2D and 3D computer aided design skills in architecture and construction industries are practiced and critiqued by professionals and model building is used to improve visualization skills. Industry leading software packages learned and used include Autodesk products: AutoCAD, Inventor, Revit; Dassault Systems Solidworks, and CNC Software Inc. Mastercam. Software certified user certifications are available.

Prerequisites: Mechanical/architectural drafting/design recommended.

Engineering Development and Design (EGR521/522)

The curriculum of the Engineering Development and Design program emphasizes principles and practices, engineering standards and the use of references and technical information for production of manufactured goods. Industry based 2D and 3D computer aided design skills are taught, as well as introduction to computer aided machining (CAM) and computer aided coordinate measuring (CMM). Rapid prototyping is integrated with the use of multiple types of 3D printers and computer numerically controlled (CNC) equipment. Industry leading software packages learned and used include Autodesk products: AutoCAD, Inventor, Revit; Dassault Systems Solidworks, and CNC Software Inc. Mastercam.

Prerequisites: POE or IED recommended.

Intro to Robotics (EGR218)

The Intro to Robotics program introduces students to the world of robotics and automation. Through the one semester course, students will learn how to program in multiple languages, like Lego NXT-G, Basic and C++, and a little electronics. Students apply this knowledge to project-driven course work, including the operation and programming of robotic and automation systems. This course is designed for students interested in STEM.

Engineering, Robotics & Electronics (EGR485/486)

The one-year Engineering, Robotics and Electronics program focuses on the application of electronics and physics. Students work with the operation of electronic devices and integrated circuits. Students apply this knowledge to project-driven course work, including the operation and programming of robotic systems. This course is designed for students with an interest in science, engineering, or electronics. This program includes Digital Electronics course work.

Digital Electronics (EGR506)

Digital Electronics is the foundation of all modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras and high-definition televisions. The major focus of the course is the process of combinational and sequential logic design, teamwork, communication methods, engineering standards and technical documentation.

Prerequisites: Proficient in reading, math, and science based on IA Assessments

Environmental & Agricultural Sciences Academy

Aquarium Science (AQS465 / AQS466)

In Aquarium Science, students experience aquatic animal husbandry and aquaculture in a facility modeled after a professional public aquarium laboratory. They learn to replicate environmental conditions in the lab similar to those on a coral reef by studying the effects of lighting, water quality, and nutrition on the saltwater organisms in their care. Hands-on activities in the laboratory include breeding saltwater clownfish, propagating live corals and anemones on the coral farm, breeding jellyfish, and live food culture. This program prepares students for careers in Marine Biology, Environmental Science, commercial aquaculture (fish hatcheries), public aquariums, aquarium maintenance, pet industries and most environmental fields. Students in Aquarium Science are eligible to participate in an optional marine field ecology trip in the spring semester for DMACC credit. (Aquarium Science is an elective course and does not satisfy high school science credit requirements.)

Prerequisite: None

Marine Biology (AQS445 / AQS446)

The Marine Biology program puts students face to face with hundreds of marine organisms found around the world. Students won't just learn about the ocean from books, they also take care of over 100 "tiny oceans" during the year and personally interact with sharks, jellyfish, corals, nautilus, and hundreds of fish in a new facility modeled after university laboratories and public aquariums. Students are also given the opportunity to conduct their own research projects, participate in science fairs, practice field work by kayaking, dissect different organisms, and more. What makes this program so unique is that it is a student-run laboratory and aquarium which gives each student the opportunity to literally get their hands wet in everything that goes on, but to also leave a legacy for other students by coming up with new ideas for aquariums and different marine organisms to have in the program.

An optional Field Studies course occurs in March where the students are able to put their skills to the test, earn college credit, and have a lot of fun! For 1-2 weeks, students become "Marine Biologists" and participate in several activities to gain an

understanding of life as a marine biologist. Previous trips have gone to California, Texas, and Florida. Most expenses for this trip are the responsibility of the student. At least one fundraiser is made available to students to help offset the cost.

Prerequisite: High School or College Biology, Proficient in reading, math, and science on the IA Assessments.

Agri-Science Academy

Animal Science and Horticulture

Animal Science: (SCI239/SCI402)

Horticulture: (SCI241/SCI242)

At our Agriculture Science Academy at 201 County Line Road on the south side of Des Moines (south of Blank Park Zoo), students learn about animals and plants through hands-on activities and exciting projects. The nation's largest secondary school student-run greenhouse and livestock facility allow them to gain practical experience in fields including agricultural business, environmental science, horticulture, and veterinary careers. Students are enrolled as members of FFA, the national youth leadership organization, which enhances speaking and leadership skills while attending the academy.

During the 2nd year of the program, students can choose which area they would like to concentrate. Multiple courses are available, including:

- Hort. Environmental Science (SCI245/SCI246)
- Animal Science/ Vet Careers (SCI443/SCI444)
- Global Animal Science (SCI511/SCI512)
- Applied Plant and Animal Sciences

Applied Plant and Animal Sciences

This class will be based on the practical sciences that relate to the everyday uses of both plant and animal based products that we all use day in and day out, through our everyday lives. Students will learn the sciences behind product development through hands on laboratory experiments where students actually produce the products and learn the science behind the products in our new Agricultural Science labs. Also students will have the opportunity to learn and apply science based experiments in the field of biology and biotechnology with live organisms.

Des Moines has a vast network of Agricultural based businesses that we will utilize through many on site field trips. Students will be able to learn the basics at our Ag-science lab and then actually connect with leading agricultural businesses and explore careers and opportunities with these industry leaders. We will visit production agriculture farms outside of the urban area, to gain an understanding of how the food to table agriculture model works.

Energy & Sustainability (SCI231/SCI232/SCI331/SCI332)

The Iowa Energy and Sustainability Academy (IESA) is a cross-curricular class which prepares students for entry into the high-tech world of green building and various energy technologies. Students study the science of energy conservation and management, sustainability, field ecology, practical design, and much more in a hands-on, project-based, community-based learning environment. An optional spring break trip can be a supplement to this cutting-edge career area.

Some unique opportunities in IESA:

- Hands on science with water, air, and soil test kits.
- Work with real small scale wind generators, solar photovoltaic cells, and hydrogen fuel cells.
- Unique –special field experiences such as Minneapolis and Chicago to visit such things as zoos, malls, and museums. See efforts to recycle, save energy, and take care /preserve plants/animals. Also visit wind farms and natural areas throughout Iowa.

Prerequisites: Strong interest in sustainability career.

Family & Consumer Sciences Academy

Culinary Arts & Restaurant Management

(CUL365/CUL366/CUL465/CUL466/CUL469/CUL470)

Culinary Arts students explore opportunities for employment in the hospitality and food service industry through the operation of the student-run Central Campus Café. Students receive their ProStart certification from the National Restaurant Association and compete in local and national competitions. Students plan and prepare food, use institutional equipment, set up the dining room, and serve customers on designated Central Campus Café days. Students also have the chance to visit area restaurants and other hospitality businesses.

Fashion Design & Merchandising (FDM327/FDM328)

Within the creative discipline of Fashion Design, students discover fascinating fundamentals of the fashion industry and learn about all of the exciting behind-the-scene details that make every show and every display perfect. Study famous and up-and-coming designers, explore historical and current trends, and learn the importance of alterations and proper fit. In this program students building upon their sewing skills, create fashion drawings, and analyze the designs of others. The program enhances entrepreneurial skills and techniques to successfully market their designs in the fashion industry. The culminating event for this program is a spring fashion show that is created and produced by the fashion students and other cooperating Central Campus programs.

Prerequisites: Sewing / Fashion courses recommended

Health Sciences Academy

Career Opportunities in Health (COH311/COH312)

Career Opportunities in Health introduces students to a variety of health careers through a curriculum that integrates academic and workplace skills. Rotations at UnityPoint Health-Des Moines hospital and clinic locations, as well as other private clinics throughout the metro, provide observation experiences that allow students to explore careers of their interest, learn about medicine and work towards an understanding of the big picture of healthcare while developing personal skills.

Prerequisite: Current immunizations are required.

Anatomy & Physiology (SCI521/SCI522)

The yearlong advanced Anatomy and Physiology program covers the structure and function of the human body from the cellular level to organ systems. The organ systems studied are the skin and integumentary system, skeletal and muscular systems, nervous system and the senses, endocrine system, cardiovascular system, lymphatic system and immunity, respiratory system, urinary system, digestive system – including nutrition, and reproductive system. Anatomy and Physiology offers college credits through laboratory and exams, and experimental write-ups and projects

College Genetics & Microbiology(SCI509/SCI510)

The yearlong advanced Genetics and Microbiology program looks at the medical world through our genes. Students extract DNA, perform experiments normally only done in research and college labs. Additionally, they study the effects of genetics on cancer; the controversy and uses of stem cells; grow glowing bacteria art and many more fascinating projects. Students take field trips to research centers, colleges, and other pertinent sites that help them in their understanding of the genetic world.

College Genetics and Microbiology offers college credits and students who successfully complete the program with a grade of B or better receive a \$500 college scholarship.

Prerequisites: Proficient in reading, math, and science based on IA Assessments.

Health Science Specialist

Within the Health Science Specialist program, students develop nursing assistant skills in the classroom and laboratory setting at Central Campus. Clinical experience also takes place at local hospitals and long term care facilities; learning the skills and vocabulary of health care aiding to develop a successful career in the health field. This program also provides students the opportunity to obtain health care provider BLS certification. Upon completion of this course, students are prepared to take the Certified Nurse Assistant (CNA) exam for Iowa.

Prerequisites: Criminal / Abuse Background check; Immunization form as required by clinical site; flu vaccine – October through April. Must pass with a C or higher to continue. See DMACC website for more information.

Nurse Aide (Basic & Advanced) (CNA391/CNA394)

These programs give students the opportunity to learn the necessary skills and training to work in various health care settings. They experience classroom and laboratory instruction along with supervised clinical experience in local long-term care (nursing home) and hospital settings. The advanced program also provides students the opportunity to obtain health care provider BLS certification.

Nurse Aide certification is required for admission to most Iowa nursing schools. Either of these courses prepares students for the nurse aide certification. This course includes classroom and laboratory instruction at Central Campus and supervised clinical experience at various health care settings. In addition to the content of the 75-hour Nurse Aide class, the 150-hour Advanced Nurse Aide class covers skills and knowledge utilized by nurse aides in skilled-care units and in hospital areas. Content in the 150-hour course is presented at a faster pace than in the 75-hour Nurse Aide class.

Prerequisites: Criminal / Abuse Background check; Immunization form as required by clinical site; flu vaccine – October through April. Must pass with a C or higher to continue. See DMACC website for more information.

Skilled Trades Academy

Skilled Trades Apprentice (STA219/STA220)

Apprenticeship explores the different career opportunities available in the construction trades. Students are introduced to different Local apprenticeship programs that are registered with the Department of Labor. Students learn about building materials and fasteners, the major components of a building, basic power tool and hand tool usage, and receive an OSHA 10-hour Safety Class.

Computer Aided Design Technology: MaDE - Manufacturing and Design Engineering (EGR327/AGR328)

This program provides occupational and technical skills for job entry in manufacturing and construction or college entrance in the fields of engineering, design, and architecture. You will be introduced to principles and practices, engineering/construction/manufacturing standards, and the use of references and technical information. In this program students design, document, and build their activities using industry leading software and equipment. Participation in a student organization is encouraged and industry software certifications are available.

The Computer Aided Design Technology program is a two or four semester career area that provides students with the occupational and technical skills for job entry in manufacturing and construction or college entrance in the fields of engineering, design, and architecture.

The engineering/manufacturing curriculum of this course emphasizes principles and practices, engineering standards and the use of references and technical information for production of manufactured goods. Industry based 2D and 3D computer aided design skills will be taught, as well as introduction to computer aided machining (CAM) and computer aided coordinate measuring (CMM). Rapid prototyping will be integrated with the use of multiple types of 3D printers and computer numerically controlled (CNC) equipment.

The architectural curriculum of this course emphasizes design studies and technical information, and the production of construction drawings. Interior design, landscape design and the development and study of energy efficient housing is incorporated in the curriculum to prepare students for changes in the housing industry. 2D and 3D computer aided design skills in architecture and construction industries are practiced and critiqued by professionals. Model building is used to improve visualization skills.

Industry leading software packages learned and used include Autodesk products: AutoCAD, Inventor, Revit; Dassault Systems Solidworks, and CNC Software Inc. Mastercam. Software certified user certifications are available.

Prerequisites: Mechanical/architectural drafting/design recommended.

Carpentry (STA265/STA266/STA365/STA366/STA465/STA466)

In the Home Building program, students construct a house from the basement to the roof. This program concentrates on craftsmanship in framing, floors, trim, cabinetry, and finish work. First year students are involved in building sheds, garages and second year students build a house. Students learn teamwork and participate in budgeting, purchasing, and estimating to prepare for careers in contracting. This experience has direct links to the local union apprenticeship program, DMACC and other training programs after graduating from high school.

Students have an opportunity to earn a ten-hour OSHA card for general construction, certify in Lead Safe Work Practices, Powder Actuated Tools and learn to drive a skid loader.

Prerequisites: Woodworking Tech. or Fundamentals recommended. Grades: 10-11-12

Advanced Paint Applications (STA271/STA272/STA369/STA370)

The Advanced Paint Applications program focuses on getting students in the field to acquire the skills necessary for the commercial painting industry. They learn the proper use of hand and power equipment used for applying a variety of finishes. Some specific skills taught in the program include brush and roller applications, estimating costs, surface preparation, and taping for drywall applications. Along with direct links to union apprenticeships, students can earn a ten-hour OSHA card for general construction.

Prerequisites: Technical Education course recommended.

Plumbing (STA335/STA336)

Plumbing is a "hands-on" program. Students will start the class by learning the basics of safety, math, and the tools used in this skilled trade and progress to piping Plumbing systems. Students will also learn about apprenticeship and postsecondary opportunities in this field and earn college credits.

Electricity (STA371/STA372)

Electricity is a "hands-on" program. Students will start the class by learning the basics of safety, math, and the tools used in this skilled trade and progress to wiring projects. Students will also learn about apprenticeship and postsecondary opportunities in this field.

Welding Technology (STA375/STA376/STA475/STA476)

Welding provides opportunities for students to gain skills in blueprint reading, design, layout, and fabrication of specific projects great and small. Throughout the program, they develop skills in different welds such as oxy-acetylene, shield metal arc, MIG, and plasma arc cutting. Students also receive instruction on key construction welding techniques to include pipe welding, as well as TIG welding with a variety of steels and steel alloys. This course gives them the opportunity to participate in the Student American Welding Society organization.

Prerequisites: Technical Education course recommended.

Technology & Systems Integration Academy

Information Technology Network Administration

Information Technology Network Administration (ITNA) is a multi-year program designed to assist students in acquiring the knowledge and skills needed for success in one of today's fastest growing career areas. Hardware courses focus on evaluation, repair and replacement of computer hardware components and the installation and configuration of computer operating systems. The software courses focus on the installation and configuration of network operating systems, network design and administration, security and troubleshooting. Students who successfully complete this program can earn IT certifications and college credits. The skills learned in this course are a solid foundation for a career in IT.

Prerequisites: B or better in Computer Applications. Grades: 10-11-12

Cybersecurity (CBS381/CBS382/CBS383/CBS384)

Cybersecurity is a multi-year program with two block courses designed to assist students in acquiring the knowledge and skills needed for success in one of today's fastest growing career areas! Students learn about firewalls, vpns, computer forensics, ethical hacking, and so much more! We also have a ton of fun doing hands-on work, going on field trips, participating in the cybersecurity competitions, paid registered apprenticeships, and much more! Students who complete this course can earn IT certifications and over 30 DMACC credits! The skills learned in this course will be a solid foundation for a career in cybersecurity!

Students will all receive DMACC dual-enrollment credit for the following courses. These college credits will transfer to any accredited college, or can be used as a part of a degree obtained from DMACC.

DMACC Core competencies for these courses can be found at:

<https://go.dmac.edu/competencies/Pages/welcome.aspx>

Game Design & Programming (TEC435/TEC436)

Delving into both technology and creativity, Software Design and Gaming immerses students into a simulated internship for a video game design company. They use the design process as well as other skills (graphic design, programming, and music generation) to create 2D and 3D video games. Game creation software is used to package images, textures, audio, media, and programming code into the final product. Students should anticipate a video game design competition in the spring semester.

Video game software compiler DarkBASIC Pro will be used to package images, textures, sounds, music, media and programming code to package final game products. Experience in software design will allow the student to realize the potential for entertainment and educational game design, application design and programming, and simulation design.

Prerequisites: Computer class recommended along with strong interest in field.

Transportation Academy

Introduction to Automotive ((CAR228)

Basic physical and mechanical principals related to the transportation field, including ownership, maintenance, and related careers will be covered in this course. Through instruction, demonstrations, hands-on and problem-solving activities, students gain knowledge of skills involved in the operation and servicing of internal combustion engine systems, and the body and structural systems of various vehicles, including their parts and accessories. They also learn to apply safety as related to the vehicle, hand and power tools, test equipment, and materials common to this course. Students gain additional knowledge and skills in the cranking and charging systems, fuel systems, power transmission devices, body and chassis systems, steering components, and accessory systems. Instruction will emphasize technologies related to modern vehicles with an introduction to electronic and computer-controlled systems. Introduction to Auto Technology, Auto Collision and Welding are included in this course of study.

Prerequisites: Strong career interest.

Automotive Collision Repair (CAR313/CAR314/CAR413/CAR414)

Students in the Automotive Collision Repair program gain the marketable trade of repairing what others have managed to destroy. They are provided with supervised experience in repairing late model automobiles. Quality workmanship, shop safety, work ethic, cooperation, dependability, and responsibility are topics of importance. Students in this program work with the latest hand and power tools unique to this trade.

Prerequisites: Technical education courses recommended along with strong career interest in the field.

Automotive Technology (CAR317/CAR417/CAR418/CAR421/CAR422)

In the Automotive Technology program students complete competencies and gain skills in working with automotive engines, brakes, steering and suspension, electricity/electronics, HVAC, engine performance, and transmissions. The program is also affiliated with most of the major automotive manufacturers including Ford, General Motors, Toyota, Honda and Chrysler through AYES (Automotive Youth Educations Systems).

Students are engaged academically in the classroom learning basic automotive knowledge and skills. Students are then exposed to real world activities in the automotive lab learning how to safely diagnose, disassemble, assemble and repair all aspects of the modern automobile. Students are introduced to automotive apprentice training programs through dealership tours and job shadowing. The AYES program allows successful students the opportunity to get a head start on their career with early entrance into dealerships and repair facilities through internships and co-op agreements. Students also have the opportunity to certify in four automotive areas through Ford Motor Company in the Maintenance and Light Repair (MLR) Program.

Prerequisites: Tech Ed course recommended.

Aviation Technology

(AVI220/AVI222/AVI224/AVI230/AVI232/AVI234/AVI237/AVI238/AVI240/AVI242/AVI341/AVI342)

The Aviation Technology Academy at 205 County Line Road on the southside of Des Moines is designed to train students for careers in various areas of the rapidly growing Aviation Industry. Students have opportunities to become adept in Airlines Maintenance Airframe/Power Plant mechanics, Fixed Base Operators (military or corporate operations), and Piloting. The Aviation Technology Academy is only FAA Certified program at the high school level in Iowa, as well as the only high school program of its type in the entire Midwest. While students earn high school credit learning aviation technology, they also gain college credit at no additional cost.

Prerequisites: Technical education courses recommended along with strong career interest in the field.