

DISCOVER



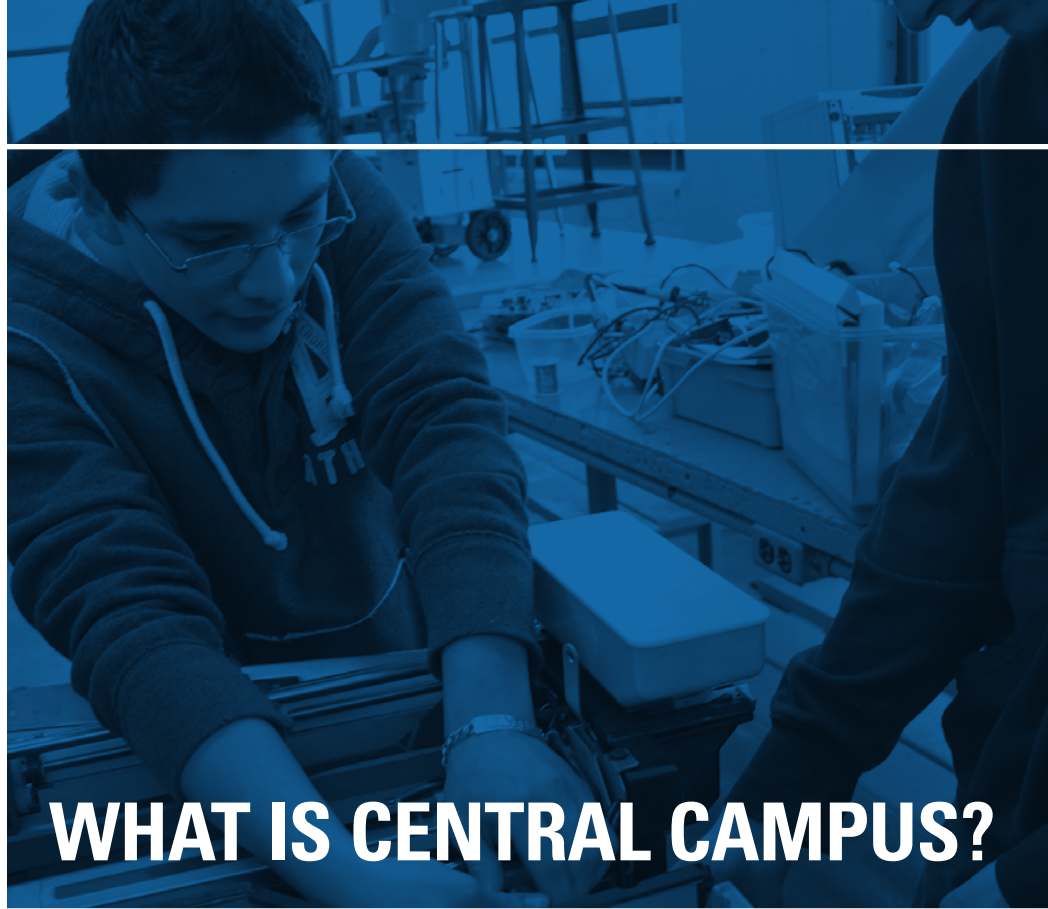


# Welcome to The Best of The Best

Discover Central Campus and discover your future. Nine advance career academies with over three dozen specialized programs offer multiple pathways to college and career readiness. Explore international learning experiences and earn nationally recognized advanced career certificates before high school graduation. At Central Campus, you are the best of the best and we're dedicated to making your best even better.

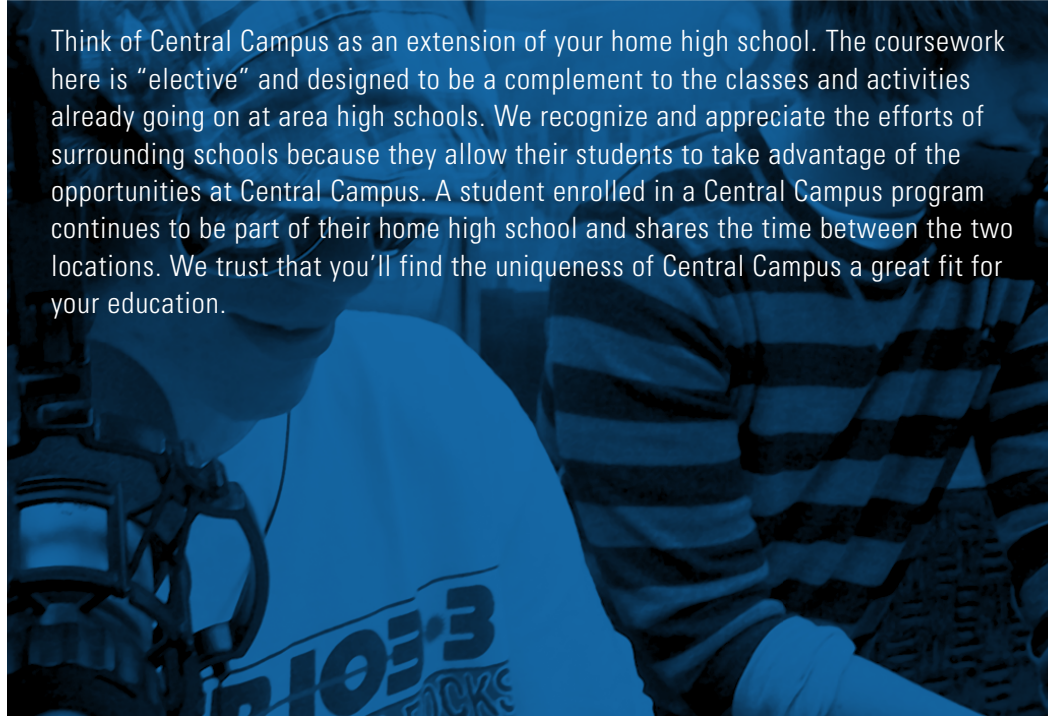
Central Campus serves as the Premier Regional Academy within the Des Moines Public Schools. More than 2,000 students from dozens of Iowa High Schools experience our Advance Career Training Programs. With academic planning and support in high school, for no extra cost - students have the opportunity to earn community college credit and two-year Associates Degree from institutions such as Des Moines Area Community College (Ankeny), Iowa Central Community College (Fort Dodge), and Indian Hills Community College (Ottumwa).

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.



## WHAT IS CENTRAL CAMPUS?

Think of Central Campus as an extension of your home high school. The coursework here is "elective" and designed to be a complement to the classes and activities already going on at area high schools. We recognize and appreciate the efforts of surrounding schools because they allow their students to take advantage of the opportunities at Central Campus. A student enrolled in a Central Campus program continues to be part of their home high school and shares the time between the two locations. We trust that you'll find the uniqueness of Central Campus a great fit for your education.



# DISCOVER

## CENTRAL CAMPUS CONTACT INFORMATION

### REGIONAL ACADEMY LOCATIONS

Central Campus  
1800 Grand Avenue  
Des Moines, IA 50309  
515.242.7846

Aviation Technology Academy  
205 County Line Road  
Des Moines, IA 50320  
515.242.8437

Agri-Science Academy  
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Des Moines, IA 50320  
515.242.8363

### LEADERSHIP TEAM

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# DISCOVER

## ADVANCED CAREER PROGRAMS

### COMMUNICATION MEDIA ACADEMY

Broadcasting and Film  
Commercial Photography  
Graphic Communications

### EDUCATION AND LEADERSHIP ACADEMY

Army JROTC  
Criminal Justice  
Early Childhood Careers  
Sports Officiating and Leadership  
Urban Leadership Academy  
Urban Teacher Academy

### ENGINEERING ACADEMY

Civil Engineering and Architecture  
Computer Software Engineering  
Engineering Development and Design  
Engineering, Robotics, and Electronics

### ENVIRONMENTAL AND AGRICULTURAL SCIENCES ACADEMY

Aquarium Science  
Energy and Sustainability  
Horticulture and Animal Science  
Marine Biology

### FAMILY AND CONSUMER SCIENCE ACADEMY

Culinary Arts and Restaurant Management  
Fashion Design and Merchandising

### HEALTH SCIENCES ACADEMY

Basic Nurse Aide & Advanced Nurse Aide  
Career Opportunities in Health  
College Anatomy and Physiology  
College Genetics and Microbiology  
Health Science Specialist

### SKILLED TRADES ACADEMY

Computer Aided Design Technology  
Construction Pre-Apprenticeship  
Home Building  
Painting and Drywall  
Welding Technology

### TECHNOLOGY AND SYSTEMS INTEGRATION ACADEMY

Information Technology Network Administration  
Mobile Apps  
Software Design and Gaming

### TRANSPORTATION ACADEMY

Automotive Collision Repair  
Automotive Fundamentals  
Automotive Technology  
Aviation Technology









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## COMMUNICATION MEDIA ACADEMY



### BROADCASTING and FILM

The Broadcasting and Film program 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. Here students learn some basic and advanced techniques in writing, announcing, shooting, editing, and preparing media for their target audience. This program opens doors through the availability of the FCC licensed radio station KDPS 88.1FM and the district cable programming through DMPS-TV. Students also have the opportunity to submit work to various contests and festivals.

### COMMERCIAL PHOTOGRAPHY

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 publicly display work at the Central Campus Student Art Exhibit and other exhibitions.

### GRAPHIC COMMUNICATIONS

From print to online, this program guides students through the design process and the creation of images for logos, posters, flyers, packaging, apparel, and more. Industry software and hands-on projects are the backbone of this creative career area. The equipment and supplies in this class are tightly aligned with the expectations and requirements of the graphic communications industry.

"I love all of the **hands-on and real-world opportunities** that Central Campus provides. I am planning a career in journalism and the teachers here gave me the **self-reliance I needed** to create a portfolio that will give me an **advantage** during future job interviews."

*Emily Blobaum – Broadcasting and Film, Commercial Photography – Roosevelt High School*







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## EDUCATION and LEADERSHIP ACADEMY

### ARMY JROTC

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."

### CRIMINAL JUSTICE

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

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.

### SPORTS OFFICIATING AND LEADERSHIP

There is an ever-growing need for qualified sports officials – from amateur to professional sports – and in this program, students learn the purpose, procedures, and requirements for success in officiating. Students learn the mechanics and consistency required for working multiple team and individual sports.

### URBAN LEADERSHIP ACADEMY

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.

### URBAN TEACHER ACADEMY

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.



"What I will remember the most about Central Campus is **interacting with people** from all of the other schools. The instructors here were a **positive influence** on me because I spent a lot of time with them. As a result, I made more **significant friendships** because of my time in JROTC."

*Alam Ramirez – Army JROTC – Lincoln High School*





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## ENGINEERING ACADEMY

### CIVIL ENGINEERING AND ARCHITECTURE

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.

### COMPUTER SOFTWARE ENGINEERING

Students successfully completing the Computer Software Engineering program find doors open to them in nearly any career using computers. Create apps for mobile devices, automate tasks in a variety of languages, and find patterns in data. Students collaborate to create and present solutions to improve the lives of others while weighing the ethical and societal responsibilities of computing and connectivity.

### ENGINEERING DEVELOPMENT AND DESIGN

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.

### ENGINEERING, ROBOTICS, AND ELECTRONICS

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

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.

Engineering programs are a continuation of **Project Lead The Way (PLTW)** in area high schools. Experience hands-on projects in a challenging high-tech environment where students prepare for careers in engineering and technology. Discover advance PLTW programs at Central Campus.

"I actually like engineering and medicine because Central Campus **provided me** with a fun and exciting learning environment. My **plans for the future** involve technology, engineering, and medicine because of the field trips and the **professional people** I got to meet."

*Dalecio Henderson – Digital Electronics PLTW – Hoover High School*









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## ENVIRONMENTAL and AGRICULTURAL SCIENCE ACADEMY

### AQUARIUM SCIENCE

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.

### ENERGY AND SUSTAINABILITY

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.

### HORTICULTURE AND ANIMAL SCIENCE

At our Agriculture Science Academy on County Line Road (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, landscaping, 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.

### MARINE BIOLOGY

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, nautiluses, 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.

"Taking Central Campus classes taught me **appreciation for hard work** and how to develop a better work ethic. I have grown as an individual. I have also learned to appreciate all of the **college credit** awarded for these classes."

*Melissa Garcia – Animal Science and Horticulture – East High School*







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## FAMILY and CONSUMER SCIENCE ACADEMY

### CULINARY ARTS and RESTAURANT MANAGEMENT

Explore opportunities for employment in the hospitality and food service industry through the operation of the student-run Central Campus Café. Receive your 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 café days. You will also have the chance to visit area restaurants and other hospitality businesses.

### FASHION DESIGN and MERCHANDISING

Within this creative discipline, 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.



“When I first came to Central Campus, I was very intimidated by the other students but my instructor helped me gain the **courage and confidence** I needed to develop the **techniques and great skills** I will use when I continue my studies in fashion and design.”

*Genesis Galdamez – Fashion Design and Merchandising – North High School*





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## HEALTH SCIENCES ACADEMY

### CAREER OPPORTUNITIES IN HEALTH

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.

### COLLEGE ANATOMY AND PHYSIOLOGY

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 AND MICROBIOLOGY

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.

### 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.

### BASIC NURSE AIDE & ADVANCED NURSE AIDE

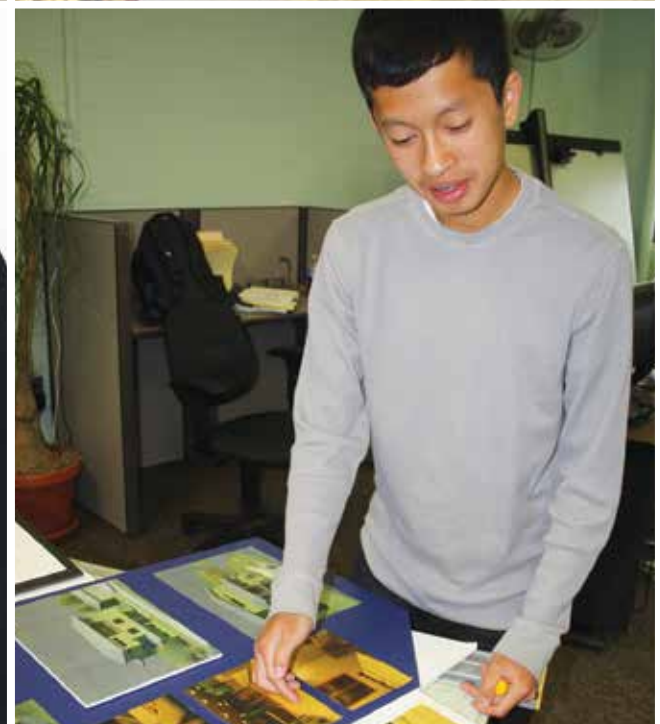
These programs give students the opportunity to learn the necessary skills and training to work in various health care settings. They experience classroom and laboratory instruction along with supervised clinical experience in local long-term care (nursing home) and hospital settings. The advanced program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

“The Central Campus courses in Health Sciences **have influenced** my future plans to study medicine. I got some **hands-on experience** with the CNA courses and I got additional **research experience** through the Anatomy and Physiology/Biotechnology courses.”

*January Philavanh – Nurse Aide, Anatomy, Career Opportunities in Health – East High School*







# DISCOVER

## SKILLED TRADES ACADEMY

### COMPUTER AIDED DESIGN TECHNOLOGY

This program provides occupational and technical skills for entry in manufacturing and construction careers or college entrance in the fields of engineering, design, and architecture. Students are introduced to principles and practices, engineering / construction / manufacturing standards, and the use of references and technical information. 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.

### CONSTRUCTION PRE-APPRENTICESHIP

Students focus on the commercial construction process in this introductory program exploring Pre-Apprenticeship. They work with experienced professionals in the field as well as representatives of local contractors and local apprenticeship programs. Here students are able to explore educational opportunities in all union trades while working on related projects.

### HOME BUILDING

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.

### PAINTING AND DRYWALL

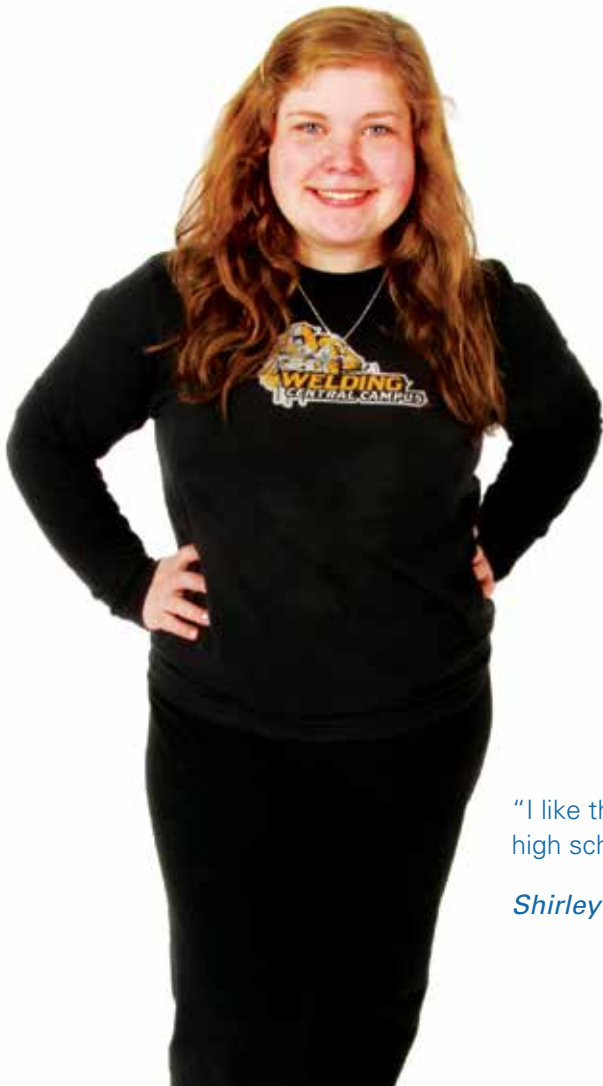
The Painting and Drywall program focuses on getting students in the field to acquire the skills necessary for the commercial painting industry. They learn the proper use of hand and power equipment used for applying a variety of finishes. Some specific skills taught in the program include brush and roller 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.

### WELDING TECHNOLOGY

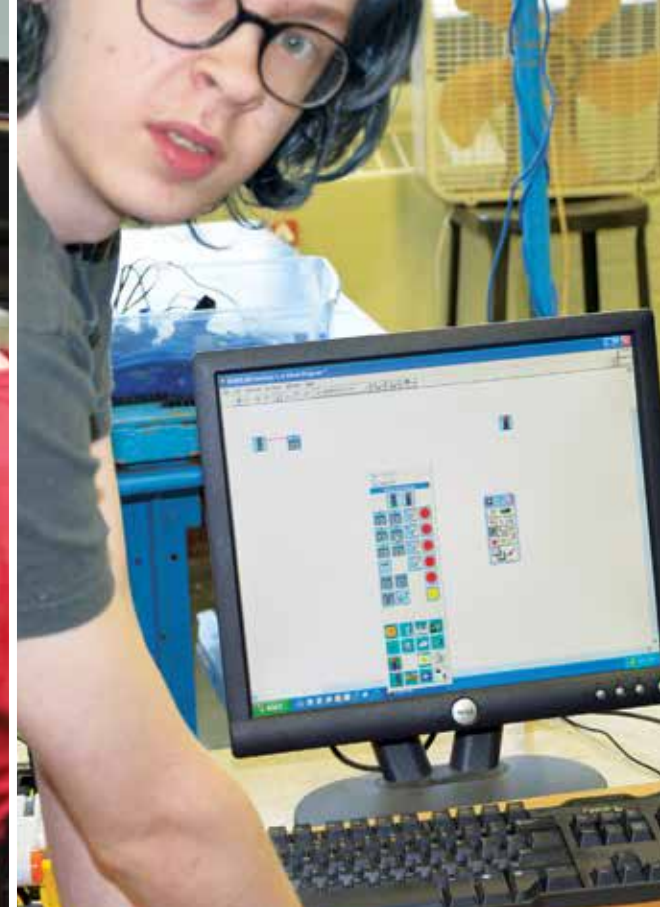
Welding provides opportunities for students to gain skills in blueprint reading, design, layout, and fabrication of specific projects great and small. Throughout the program, they develop skills in different welds such as oxy-acetylene, shield metal arc, MIG, and plasma arc cutting. Students also receive 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.

"I like that Central Campus provided me with a **practical form** of education. I absolutely feel like I'm leaving high school with the **skills** that I need to start a career or **pursue a degree** in construction engineering."

*Shirley Klier – Welding - Lincoln High School*







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## TECHNOLOGY and 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.

### MOBILE APPS

The Mobile Apps program enables students to tap into the ever-expanding universe of software for mobile technology. The program does not expect or require any previous programming or design experience, students learn the skills they need through real-world project based learning approach. Upon successful completion of the program, students are well equipped to begin a career in computer programming on their own or for a business using the Java programming language and multiple mobile application platforms. Students are eligible to earn college credit while completing the Mobile Apps program. This college credit transfers to any accredited college, or can be used as a part of a degree obtained from DMACC. This course allows us to explore careers in IT as it relates to this course and develop an electronic portfolio of student work.

### SOFTWARE DESIGN AND GAMING

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.



"I will be double majoring in computer and software engineering because Central Campus **helped me realize** what I wanted to do. The classes offered in this area **are amazing**. They are challenging but still fun and the people are **one-of-a-kind**."

*Darius Shumpart – Software Design and Gaming – Roosevelt High School*





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## TRANSPORTATION ACADEMY

### AUTOMOTIVE COLLISION REPAIR

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.

### AUTOMOTIVE FUNDAMENTALS

In Automotive Fundamentals, students learn the physical and mechanical principles related to the transportation field including ownership, maintenance, and related career opportunities in the automotive industry. They increase their knowledge about the operation and service of internal combustion engine systems and the various parts and accessories. Last, but not least, students learn shop safety related to the use of hand and power tools, run tests on equipment, and gain experience with industry vocabulary.

### AUTOMOTIVE TECHNOLOGY

The Automotive Technology program is certified by the National Automotive Technology Education Foundation (NATEF). 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).

### AVIATION TECHNOLOGY

The Aviation Technology Academy on County Line Road 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.

“Central Campus allowed me to **discover** just how much I really do love the fields of aviation and engineering. The students in my classes **actually wanted to be there** and were genuinely interested in the **opportunities** that were provided by our instructors.”

*Casey Mathews – Aviation Technology – Roosevelt High School*





# NOTES





**IOWA'S PREMIER REGIONAL ACADEMY FOR ADVANCE CAREER PROGRAMS**

**1800 GRAND AVENUE  
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