2024-2025 MHS/HCC Course Catalog Davis H. **Hart Career Center**

Marketing Graphic Arts Cosmetology **Health Sciences Diesel Mechanics Computer Science Welding Technology Agricultural Education Automotive Technology Construction Technology Project Lead the Way - Engineering Computer Services/IT/Cybersecurity**





















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Davis H. Hart Career Center

Davis H. Hart Career Center offers a variety of career and technical programs to secondary students from nine area schools. Our programs provide entry level skills and training in technical and service job areas that are in demand in today's economy. Our classes also provide preliminary skills and training for other technical fields like engineering, computer networking, healthcare and other careers. Our goal is to provide students the opportunity to develop relevant, useful and in-demand skills for the 21st Century. Secondary students receive high school credit for their career center classes and certificates are awarded for satisfactory completion of each program.

Students will enroll in courses through the high school enrollment process. Students should make sure they complete the high school enrollment paperwork in a timely manner including the HCC Application, if applicable to the courses you are requesting. Each program has maximum enrollment guidelines based on safety, supervision and technology consideration.

National Technical Honor Society

NTHS strives to bring well deserved recognition, scholarship opportunities, and career opportunities to students who excel in one of the 108 career and technical educational fields as their profession. Not only do NTHS students embody all the attributes and talent which is in demand today, these students also embrace a clear vision for tomorrow's workforce and their role in it. NTHS understands changes in industry within local communities and on a global scale. The Hart Career Center participates in NTHS and recognizes our NTHS members at the yearly HCC Awards Night.

Skills USA

SkillsUSA is a student-led organization partnering with CTE teachers and industry. The organization works together to ensure America has a skilled workforce helping each student excel. A nonprofit national education association, SkillsUSA serves students preparing for careers in trade, technical and skilled service occupations, empowering its members to become world-class workers, leaders and responsible American citizens. The SkillsUSA Framework includes personal, workplace and technical skills grounded in academics. Membership includes regional, state and ultimately national contests for students in the same areas of study. The Hart Career Center is actively involved in Skills USA and encourages our students to participate.

AGRICULTURAL PROGRAM

The Missouri Department of Elementary and Secondary Education allows three approved Agricultural Education courses to be used as a science waiver for high school graduation. If you are interested in using a three for one science waiver talk to your high school counselor. The three approved agricultural classes (Agriculture Science I, Agriculture Science II, and one upper level approved course) would waive the third-year required science course. Be aware that some colleges or universities may require three science credits and by waiving the third credit you may not meet admission requirements.

Agriculture Science I (C1000)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 9, 10, 11, 12

Note: Class is FFA Eligible and FFA Trap Shooting Team Eligible

Want to learn about animals? Agriculture Science I is an introductory course about animal science. In addition to animal science topics, we study a variety of other agriculture topics. There are large hand-on projects.

Certification Earned: students are required to complete a 10-hour OSHA safety course.

Agriculture Science II (C1010)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: Successful completion of Agricultural Science I **Note:** Class is FFA Eligible and FFA Trap Shooting Team Eligible

This class is the second step of Ag students who wish to take upper level courses at the Mexico Agriculture Department. Students will have opportunities to study many areas briefly before taking upper level courses as a junior and senior. These courses are Woodworking, including a small project, Welding, including a small project, Conservation, Soils, Plant Science, and Food Science. Along with these hands-on units, students are able to prepare for advancement in the FFA and gain important career skills through units in Leadership, Career and Personal Development, SAE, and Resume Building.

Recommended: Students are encouraged to join FFA but not required.

Agricultural Construction I (C1017)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: Successful completion of Ag Science I and concurrent enrollment in Ag Science II

Note: Class is FFA Eligible and FFA Trap Shooting Team Eligible

This class is a balanced introduction of most construction aspects. Larger units are woodworking and metal fabrication. Smaller units include: Small engines, Concrete, Plumbing, Electricity, and Precision Agriculture. For those students interested in a career working with your hands, this course is a necessary step in the Ag Construction career pathway.

Recommended: Students are encouraged to join FFA but not required.

Agricultural Construction II (C1018)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Successful completion of Agriculture Science I, II and Agriculture Construction 1

Note: Class is FFA Eligible, FFA Trap Shooting Team Eligible

Ag Construction II is a shop class through an agricultural perspective for juniors and seniors interested in a career working with your hands. Students will build on the skills gained in Ag Construction 1. Students will have more freedom on their projects during this course. Majority of class time will be spent within the Ag Shop so students should be prepared to work with saws, welders, torches, and other power tools.

Recommended: Students are encouraged to join FFA but not required.

Greenhouse (C1053)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Successful completion of Ag Science I and II

Note: Enrollment in this class allows students to be in FFA and on the Trap Team.

Students enrolled in the Greenhouse course will be exposed to hands-on learning in the school's greenhouse. Greenhouse covers content from basic plant anatomy, pests and diseases, to growing live plants and much more. Students will work with the marketing class to sell the crops produced in our greenhouse. This course spends a lot of classroom time in the greenhouse, please be prepared. Each student is highly encouraged to join the Mexico FFA Chapter. Record Books are expected to be completed while in this course.

Recommended: Students are highly encouraged to join the Mexico FFA Chapter.

Horticulture (C1030)

(School year offered: 2025-26/2027-28)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Successful completion of Agriculture Science I & II

Note: Enrollment in this class allows students to be in FFA and on the Trap Team.

Students enrolled in the Horticulture course will be exposed to hands-on learning in the school's greenhouse. Horticulture covers content from basic plant anatomy, pests and diseases, to growing live plants and much more. Students will work with the marketing class to sell the crops produced in our greenhouse. Horticulture is a project-based course. Each student is highly encouraged to join the Mexico FFA Chapter. Record Books are expected to be completed while in this course.

Food Science (C1055)

Credit(s): 0.5 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Successful completion of Agriculture Science I & II

Note: This course will be offered 1st semester with 2nd semester Wildlife Conservation Note: Enrollment in this class allows students to be in FFA and on the Trap Team.

Want to learn more about how foods are processed and the science behind those processes? Units studied will include: Principles of Food Preservation, Food Processes, Food Selection and Consumer Health, Leadership, and more. Each student is highly encouraged to join the Mexico FFA Chapter. Record Books are expected to be completed while in this course.

Wildlife and Conservation (C1071)

Credit(s): .5 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: Completed Ag Science 1 and 2 or be enrolled in Agriculture Science 2 concurrently.

Note: offered 2nd semester with 1st semester Food Science Note: Class is FFA Eligible, FFA Trap Shooting Team Eligible

This course gives an in depth look at the careers of conservation, outdoor recreation, wildlife management, and fishery management. If you have interests in careers or hobbies within these fields you will gain skills and knowledge to better yourself. Units include: outdoor recreation such as shooting range management, archery range management, food plot planning and installation, wildlife management, conservation careers, fishery operation and management, and more. This semester-long course is a hands-on opportunity to expand your knowledge of wildlife and job opportunities in outdoor activities.

Recommended: Students are highly encouraged to join the Mexico FFA Chapter.

Agriculture Communication (C1006)

Credit(s): 0.5 Credit Type: Practical Art

Grade Levels: 10, 11, 12

Note: Offered 1st semester and second semester is Agriculture Leadership Note: Enrollment in this class allows students to be in FFA and on the Trap Team

Agriculture Communication students will look into media types and uses, understand research processes, research agricultural issues, and develop leadership skills. Each student is highly encouraged to join the Mexico FFA Chapter. Record books are expected to be completed while in this course.

Recommendation: Students are highly encouraged to join the Mexico FFA Chapter.

Ag Leadership (C1005)

Credit(s): .5 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: Completed Agriculture Science 1 and 2 or be enrolled in Agriculture Science 2 concurrently.

Note: offered 2nd semester and 1st semester is Agricultural Communication **Note**: Enrollment in this class allows students to be in FFA and on the Trap Team.

Are you creative? Like to talk? How about taking a class that lets you express your creativity through communication both oral and written. Ag Leadership is a course designed to help shape you into a better communicator and to improve your leadership skills.

Recommended: Students are highly encouraged to join the Mexico FFA Chapter.

Crop Science (C1035)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Successful completion of Ag Science I & II

Crop Science is a course that will dig deep into the crops grown in Missouri and have a practical application at the school farm. Other topics will include plant biology, soils, seeds, and legal issues related to crop production. Each student is highly encouraged to join the Mexico FFA Chapter. Record books are expected to be completed while in this course.

Agribusiness Management & Economics (C1057)

Credit(s): 0.5 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Successful completion of Ag Science I & II

Note: This course will be offered 1st semester. Enrollment in this class allows students to be in FFA and on the

Trap Team.

Thinking about owning a business/farm some day? Agriculture Management and Economics is a semester class that looks at basic economic principles and business management skills. Students will be interacting with community members to gain the skills needed to manage an agriculture business. There is a capstone project for this class where students go step by step through planning an agriculture business. Each student is highly encouraged to join the Mexico FFA Chapter. Record Books are expected to be completed while in the course. **Must be enrolled in this course to take the SAE Course.**

Ag Sales, Marketing, and Mgt. (C1059)

Credit(s): 0.5 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisites: Successful completion of Ag Science I & II

Note: This course will be offered 2nd semester. Enrollment in this class allows students to be in FFA and on the

Trap Team.

This course explores agriculture sales and the financial principles related to it. Students will learn about communication styles and strategies as well as personal development. Each student is highly encouraged to join the Mexico FFA Chapter. Record Books are expected to be completed while in the course.

Must be enrolled in this course to take the SAE course.

Supervised Agricultural Experience Co-op (SAE) (C1002)

Credits: 1 or 2 hours Credit Type: Practical Art

Grade Level: 11 or 12

Prerequisites: Must have completed Agricultural Science I or II and be dual enrolled in Agribusiness Management & Economics and Ag Sales, Marketing, & Mgt. Must have a satisfactory SAE project (approved by the Agricultural instructors and HCC administration)

This course provides for the enrollment of students that are released on school time to complete a cooperative occupational experience in an approved training station in agriculture. A signed training agreement and training plan must be completed for each student. Membership in FFA is expected. The students will be required to complete monthly record book entries and bi-weekly journals.

Veterinary Science (C1061)

Credit(s): .5 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Successful completion of Ag Science I & II

Note: This course will be offered 1st semester and Advanced Livestock will be offered 2nd semester.

Note: Enrollment in this class allows students to be in FFA and on the FFA Trap Team.

Vet Science introduces basic veterinary sciences to students. Units of instruction include: terminology, anatomy, animal care, clinic procedures, and basic veterinary skills. This course uses a lot of hands-on activities to help students learn the curriculum. Each student is highly encouraged to join the Mexico FFA Chapter. Record Books are expected while in the course.

Recommended: Students are highly encouraged to join the Mexico FFA Chapter.

Advanced Livestock (C1091)

Credit(s): .5 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Successful completion of Ag Science I & II

Note: This class is offered 2nd semester and Veterinary Science is offered 1st semester.

Advanced Livestock Production is a project-based course that allows students to learn more about animal nutrition, genetics, reproduction, and animal health with an emphasis on production. This course goes beyond what is learned at the Agriculture Science I level and focuses more on production animal agriculture. Each student is highly encouraged to join the Mexico FFA Chapter. Record books are expected to be completed while in this course.

Recommended: Students are highly encouraged to join the Mexico FFA Chapter.

Animal Science (C1016)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Successful completion of Ag Science I & II

Animal Science is a project-based course that allows students to learn more about animal nutrition, genetics, reproduction, and animal health. This course goes beyond what is learned at the Agriculture Science I level and focuses more on production animal agriculture. Each student is highly encouraged to join the Mexico FFA Chapter. Record books are expected to be completed while in this course.

(School year offered: 2025-26/2027-28)

COMPUTER SCIENCE

AP Computer Science Principles (C5130)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: C or better in Algebra I

Engage in socially-relevant, project-based learning activities designed to foster computational thinking within the Big Ideas of creativity, abstraction, data, algorithms, programming, internet, and impact. With a focus on creative problem solving and real-world applications, this course gives students the opportunity to explore several important topics of computing using their own ideas and creativity, use the power of computing to create artifacts of personal value, and develop an interest in computer science that will foster further endeavors in the field.

DC Programming I (C5081)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: C or better in Algebra I

Learn the fundamentals of programming with C#, including input/output, repetition, decisions, data structures, object-oriented programming, and more! Students completing this course will have the opportunity to earn the stackable credential *IT Specialist-Software Development*.

Students in grades 11 or 12 may take this course as dual credit for 3 or 6 credit hours from State Technical College of Missouri. Additional paperwork and fees will apply. Students enrolling in this course for dual credit from State Technical College of Missouri must meet the following criteria:

- 3.00 Cumulative GPA
- Minimum of a B in Advanced Algebra
- Minimum of a B in most recent ELA course
- English: 18+ ACT or 251+ ACCUPLACER
- Reading: 18+ ACT or 250+ ACCUPLACER
- Mathematics: 22+ ACT or 265+ ACCUPLACER

Programming II (C5088)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: C or better in DC Programming I

Continue expanding your skills and your versatility with Python! Students completing this course will have the opportunity to earn the stackable credential *Programming Essentials Python*.

Applied Programming: Video Game Design I (C5115)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 9, 10, 11, 12

Prerequisite: C or better in Algebra I Suggested: C or better in Programming I

Start yourself on a path to professional video game development in this class! You will be introduced to beginning game design concepts and dive into C# programming with Unity game engine development as we build our way through a history of game design. From Pong to Space Invaders to Tetris to Fruit Ninja...everyone can put their favorite classic in their portfolio!

Applied Programming: Video Game Design II (C5116)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: C or better in Applied Programming: Video Game Design I

In this class, you will work on a game design team with your classmates and take a concept from a design document to a complete game over the course of the year. In the process, we'll learn more about getting into the industry and how to manage development, which will enhance your ability to work on an Agile Scrum team that goes well beyond "group work."

Applied Programming: Robotics (C5122)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: C or better in Algebra I Suggested: C or better in Programming I

Robotics encompasses STEM skills such as computer programming, electronic embedded systems, engineering design, and mathematics, in addition to 21st century skill sets like time management, resource allocation, teamwork, problem solving, and communications. Robotics will delve into these skills through the building and programming of VEX Robots and drones. Each pair of students will work with a robot and a drone, which guarantees plenty of hands-on time!

Applied Programming: VR/AR (C5123)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: C or better in Algebra I

Suggested: C or better in Programming I OR Video Game Design I

This course is for students looking for the skills and experience that will enable them to be the creators of tomorrow. You will create prototypes, attempt challenges, and complete quizzes to build and solidify your skillset. Whether you want to create an interactive walkthrough of an ancient ruin, a product configurator for a car manufacturer, a simulator for operating dangerous machinery, or any other experience, this course will help you bring those ideas to life in VR and AR!

Esports: Beyond the Game I (C5083) (school year offered: 2025-2026/2026-2027)

Esports: Beyond the Game II (C5084) - prerequisite: complete Beyond the Game I with a "C" or better Esports: Beyond the Game III (C5094) - prerequisite: complete Beyond the Game II with a "C" or better

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 10, 11, 12 Fund

Prerequisite: C or better in Algebra I

While the public face of esports is the players and the teams, there are myriad careers "beyond the game." This 3-year course will cover a wide range of topics including (but not limited to) organizing teams and events, streaming and shoutcasting, analysis, health and wellness, marketing, journalism, coaching and analysis, Discord programming, technical support, equity, and entrepreneurship. The class will have the opportunity to work as the team behind the teams for the Bulldog Esports program. Students will finish the course with a better understanding of the overall industry and an idea of what field of study they will need to enter to further their career goals.

Note: THIS COURSE WILL NOT INCLUDE GAMEPLAY.

Capstone Course (C5110)

Credit(s): .5 or 1.0 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: overall C or better in a program completion path (4 credits in 2 areas, minimum); INSTRUCTOR

APPROVAL REQUIRED

This capstone course will require a pre-approved plan of independent study in which the student will research and implement a design for a program, game, robotic build/task, CS-centered esports project, or combination thereof. The capstone project may be undertaken as a one- or two-semester course. The plan must be presented and approved BEFORE spring registration.

COMPUTER SERVICE/IT/CYBERSECURITY

IT Fundamentals (1 Hr) (C6119)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: completion of Algebra I with a C or better

This class allows students to learn about the basics of what makes up a computer system, and different types of computer related technologies. Introductory topics such as basic internal PC operation, the Internet, security, and cloud based networking will also be covered. Students will also be using a Pico micro-controller and a Raspberry Pi computer to explore digital electronics and computer programming. This class is NOT a computer applications class, but instead explores the underlying technologies that make computers and networks do what they do!

Computer and Network Support (2 Hr) (C6101)

Credit(s): 2.0 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: IT Fundamentals or concurrent enrollment, completion of Algebra I with a C or better

This class will train students in the field of computer technology support. Students will learn about various computer operating systems, computer hardware and peripherals, mobile devices, and various utility applications. Students will also learn about the setup of computer networks and will configure computer devices

to communicate on a network. Troubleshooting computer devices and networks, as well as performing modifications and upgrades, will be emphasized. Basic IT security concepts will also be addressed throughout the course. Training for obtaining the CompTIA A+ IT support certification is emphasized in this program. Students will be given the opportunity to get the PC Pro certification at the end of this class.

Certification: TestOut PC Professional

Networks & Cybersecurity (3 Hr) (C6102)

Credit(s): 3 Credit Type: Practical Art

Grade Level: 12

Prerequisite: B average in IT Fundamentals and Computer and Network Support

This is an advanced three-hour class (2 hour with instructor approval) that trains students in the setup and support of local area networks. Students will construct their own network, configure network equipment, and work with Windows and Linux based servers. Advanced concepts such as virtualization, scripting, network protocols/services, and troubleshooting will be covered. Students will also learn about how networks and systems can be compromised, and how to properly defend against different types of cyber-attacks. Cybersecurity concepts will be stressed throughout this course. Students will be given the opportunity to get an IT support certification at the end of the course.

Certification: CompTIA A+ certification

CONSTRUCTION

Introduction to Construction (1 Hour) (C6024)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 10

Introduction to Construction allows students to have a brief overview of the construction industry. Intro to construction will complete a basic safety seminar during the first month. Students will then move on to small projects that focus on their ability to utilize small power tools of the trade. Handling of materials and tools will be addressed. Students will have the opportunity to study residential, commercial, industrial and public works and how they work and interrelate with one another to make our economy grow and provide the backbone to our country and culture. Students will then be allowed to work on various projects their counterparts in Construction I and II work on. Students are expected to demonstrate safety practices and teamwork. Students are expected to demonstrate professionalism at all times on the job.

<u>Construction Technology I (3 Hour) (C6022)</u> <u>Construction Technology II (3 Hour) (C6023)*</u>

Credit(s): 3 Credit Type: Practical Art

Grade Level: 11, 12

*Prerequisite for Construction Tech II: completion of OSHA 10 & successful completion of Construction I

Construction Technology is for students who plan to work in construction related occupations. Construction Technology I students are required to complete OSHA 10 safety certification. Students will receive training in the various aspects of the construction industry. Included in this course are hands-on experiences as well as classroom content related to construction project planning and management, trade skills, and safety. Students are expected to be able to perform basic construction related math. Students will perform calculations to figure the cost of jobs, write bids and estimates. Students are expected to demonstrate safety practices and teamwork.

Students are expected to demonstrate professionalism at all times on the job. Exceptional Senior students (who demonstrate that they have mastered the above criteria) are given the opportunity to have outside apprenticeships in their spring semester.

Offered certification: OSHA 10

COSMETOLOGY

Cosmetology I (3 Hr) (C7010)

Credit(s): 3 Credit Type: Practical Art

Grade Level: 11

Required: Cosmetology Application/Meeting Process/Early Deadline

Cosmetology II (3 Hr) (C7011)

Credit(s): 3 Credit Type: Practical Art

Grade Level: 12

Required: Cosmetology I

Required: A school kit is required for each student accepted into the program and includes the tools and books needed for the course.

Total cost of kit: \$700

May of Sophomore year: \$250 due the first Friday of May May of Junior year: \$250 due the first Friday of May May of Senior year: \$200 due the first Friday of May

This course is for students who wish to pursue a career in the field of Cosmetology. Cosmetology consists of haircutting, hair coloring, shampooing, styling, arranging hair, manicures, pedicures, hair removal, scalp treatments, chemical texture services (perms and relaxers), disinfection procedures and many other services. Students are required to have a specific amount of hours in each of the subjects required by the MO State Board of Cosmetology and Barber Examiners. This program is offered to secondary and post-secondary students through an interview process.

Students are required to have a student license issued by the MO State Board of Cosmetology and Barber Examiners prior to the beginning of school.

Hours will be the same as the rest of HCC depending on whether you are a morning or afternoon student and students will attend class Monday-Friday. Once a student has acquired 160 hours they will be allowed to work on actual clients in the salon. The Cosmetology school is open to the public and clients come to the school to have students perform services on them.

Certification: Once students' requirements have been fulfilled, students will be required to take a written State Board exam and a practical State Board exam. Once both exams have been taken and passed, the student will be issued a CA Cosmetology License.

GRAPHIC ARTS

Graphic Arts Occupations I (3 Hour) (C6171)

Credit(s): 3 Credit Type: Practical Art

Grade Level: 11, 12: if space available - seating priority is given to Graphic Arts II students

Recommended Prerequisite: English II with C or higher, strong basic math, communication skills and/or

instructor/director/counselor approval

Graphic Arts Occupations I students learn the design process, elements and principles of design and printing applications as well as the fundamentals of the Mac OS using Adobe Creative Cloud design applications. The class is focused on visual communication using digital photography, typography, color theory, composition for print media and marketing solutions using Adobe CC Photoshop, Illustrator, InDesign and Acrobat. Students will be provided an online Adobe Creative Cloud account and can access all Creative Cloud apps when participating in the program. This added benefit allows students to access Adobe CC remotely. Students will learn design skills through hands-on projects and community client work. Projects may include logo design, branding, business cards, brochures, vinyl cutting and other various types design and production. Students enrolling in this course should have a strong interest in subjects such as visual and commercial art, advertising, multimedia design, printing press and screen-printing operations. Graphic Arts Occupations will follow modified Missouri Department of Education competencies as well as the PrintED/SkillsUSA Graphic Communications competencies and the Adobe Certified Professional - Visual Design certification standards.

Students who take this course will also benefit from the experience that will prepare them for the workforce while building a strong portfolio, resume and workplace skills. Students taking Graphic Arts I should plan on attending Graphic Arts II to complete the program and can qualify for fourth semester On the Job Training. OJT is an opportunity for students to obtain employment within the Graphic Arts industry. Students work at the jobsite instead of the classroom during the fourth semester while obtaining a grade for that employment. This class is focused on the student that plans to further their knowledge and experience in the industry through a 2 or 4 year college, or any entry-level positions in the Graphic Arts industry.

Student Organization: Students are expected to join SkillsUSA

Graphic Arts Occupations II (3 Hour) (C6172)

Credit(s): 3 Credit Type: Practical Art

Grade Level: 12

Prerequisite: Successful completion of Graphic Arts Occupations I

Graphic Arts Occupations II students will refine their design and printing skills learned in Graphic Arts Occupations I. Continued use of Adobe CC applications will enhance skills from the previous year.

A broad project base will expose the student to many areas of the print industry. Students will continue to work with clients, create logos, brochures, advertisements, vinyl banners and stickers as well as learn new printing processes like screen-printing, sublimation and large format printing. This class will focus on real-world, team based projects throughout the year allowing students to work with clients while building valuable employability skills while building their portfolio.

Each student will complete the class with a digital portfolio suitable for use when applying for employment and college design programs. Graphic Arts Occupations will follow modified Missouri Department of Education

Competencies as well as industry recognized credentials including PrintED/SkillsUSA Graphic Communications competencies and Adobe Certified Professional - Visual Design certification standards.

On the Job Training is an option for a successful fourth semester student in the Graphic Design program. OJT allows the student to obtain employment within the industry and would allow the student to work during classroom hours. The OJT program is an excellent opportunity for students to gain and be paid in an entry level position, while completing the program. This class is focused on the student that plans to further their knowledge and experience in the industry through a 2 or 4 year college, or any entry-level positions in the Graphic Arts industry.

Student Organization: Students are expected to join SkillsUSA

HEALTH SCIENCES

Medical Terminology (C3021)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 11, 12

Are you interested in a health related career? This course will help you decode and understand terminology used in the medical field. It is a foundational course for any health profession. Medical Terminology may be taken independently as a 1 hour course or as part of the Health Sciences block.

Health Sciences (C3015)

Credit(s): 2 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisites: 17 years-old before January of school year enrolled.

Credentials: OSHA for Health Care, American Heart Association Healthcare Provider Basic Life Support CPR certification and CNA certification is a requirement and part of the coursework.

Health Sciences is a one-year course of study that prepares students for employment in a long-term care facility, as well as work for home health care agencies, hospitals, doctor's offices, private pay services, and many other employers or to continue on to pursue a college education in health care. The program is designed to teach skills in resident care which will qualify students to perform basic nursing procedures and to assist licensed practical nurses or registered professional nurses in direct resident care.

First semester consists of classroom and simulated lab settings that introduce vocabulary related to health care, anatomy and physiology, basic nursing skills, fire safety and disaster training, resident safety and rights, social and psychological problems of residents, and the methods of handling and caring for mentally confused residents.

Second semester consists of 100 hours of supervised on-the-job training (clinical practice) many which will be outside of the school day. Clinicals require students to perform hands-on patient care with residents at local Long-Term Care Facilities. Hands-on patient care includes skills such as: performing vital signs, supporting residents with activities of daily living (showers, eating, toileting, etc.), and working with residents who have dementia, immobility, and other common geriatric conditions. Students are required to transport themselves daily to their assigned clinical setting. After completion of semester two clinical work, a written state exam is given and a practical exam is completed at a training site in order to become certified.

Clinical Requirements: In order to participate in On-Job-Training to acquire clinical hours for CNA certification, students will be required to pass a Family Care Safety Registry background check, have proof of a negative 2-Step

TB test, and have proof of all immunizations being up to date. A flu shot is recommended, but not required. Students will need scrubs (color to be determined by the teacher) and appropriate shoes. Instructor will assist students in finding suitable placement.

Every student will have a chance to promote personal and professional skills through participation in SkillsUSA.

MARKETING/PERSONAL FINANCE

Fundamentals of Marketing (C2000)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 9, 10, 11, 12

Explore the strategies and tactics used by the world's most successful companies. Class time blends creative group projects, individual assignments and in-depth analysis of innovative (as well as disastrous) marketing initiatives from well-known businesses. Learn and apply basic concepts of marketing and characteristics of free enterprise, including promotional strategies, branding/advertising, entrepreneurship, branding, pricing, economics, and product development/distribution. DECA membership, which is strongly encouraged to all marketing students, offers additional opportunities to participate in marketing-related conferences, field trips, and competitions.

Recommended: highly encouraged to join DECA

Advanced Marketing (C2010)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: Marketing or Sports & Entertainment Mktg with a grade of "C" or better

This course is designed to further develop the business/marketing skills established in the prerequisite courses and learn advanced business/marketing skills in such areas as advertising, customer relations, supervision, employee-employer relations, product development, economics, research and communications. The course is project-based and will stress the importance of teamwork and the use of technology in order to complete assignments. Students are strongly encouraged to expand their marketing skills by participating in the DECA student organization. Students may earn college credit through Moberly Area Community College after successfully completing this course.

Recommended: highly encouraged to join DECA

Marketing Entrepreneurship (C2050)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 9, 10, 11, 12

Be immersed in a learning laboratory where you get to apply for and interview for specific jobs within the learning laboratory. Be a part of the managerial staff that assigns schedules, runs the spreadsheets for orders, and oversees workers. The positions of bakers, baggers, and cleaning crew will also be available. Bakers will prepare and cut the dough for dog biscuits. Baggers will fill orders and take care of quality control. Cleaning Crew will take care of the dishes used, wipe down counters and sweep. Be prepared to be creative and you should be willing to work with a team. Dog biscuit orders will be prepared and sent out on a monthly basis, at minimum, as well as other pet items. These items are sold to the district staff. We will not be baking daily. Classwork will cover business management skills and basic economic principles.

Must be able to pass a safety test to be in the kitchen.

Recommended: highly encouraged to join DECA or Skills USA.

<u>Cooperative Marketing Education (C2030)</u> <u>Cooperative Marketing Education (No Credit) (C2040)</u>

Credit(s): 1 or 2 Credit Type: Practical Art

Grade Level: 11, 12 Required: COE Application (PDF shared with you via email or get a copy from your counselor)

EARN WHILE YOU LEARN! Cooperative Marketing Education is a work experience program designed to put the marketing education student in an approved paying marketing job. In cooperation with the school and the employer, the student will apply his/her marketing knowledge as taught in the related marketing class. Students will work a minimum of 10 hours a week for each credit hour (2 credits maximum) at an approved marketing job. The second year, students must have satisfactorily completed year 1 of Cooperative Marketing Education, have instructor's approval and be enrolled in a marketing class. Students continue in paid marketing positions using the skills learned in the marketing class. Students work a minimum of 10 hours for each credit hour (2 credits maximum) at an approved marketing job with cooperation of their employers and the school. All worksites must have prior approval by the COE coordinator.

REQUIRED GRADUATION COURSE:

Personal Finance (C4900)

Credit(s): 0.5 Credit Type: Personal Finance

Grade Level: 10, 11, 12

Understanding and managing personal finances are key to one's future financial success. This one-semester course is based on the Missouri Personal Finance Competencies and presents essential knowledge and skills to make informed decisions about real world financial issues using Dave Ramsey's nationally acclaimed "Financial Peace" program. Students will learn how choices influence occupational options and future earning potential. The course content is designed to help the learner make wise spending, saving and credit decisions and to make effective use of income to achieve personal financial success.

MECHANICS: AUTOMOTIVE & DIESEL

Auto Mechanics I (3 Hour) (C6042) Auto Mechanics II (3 Hour) (C6043)

Credit(s): 3 Credit Type: Practical Art

Grade Level: 11, 12

This Automotive Service Excellence (ASE) certified-program prepares students to meet the challenges of diagnosing today's automobiles. State-of-the-art equipment is provided to prepare students to perform the repair tasks involved in the automotive industry. The curriculum is delivered through a combination of computer-based modules and shop work.

Certification: Year I Students - OSHA Training

Year II Students - ASE Exams in Maintenance & Light Repair, Suspension & Steering and Brakes

<u>Diesel Mechanics I (3 Hr) (C1103)</u> <u>Diesel Mechanics II (3 Hr) (C1104)</u>

Credit(s): 3 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: An interest in a career in Ag-machinery sales and services, diesel technology or related fields.

As a student in the Agriculture Machinery/Diesel Technology program you should be able to:

- Manipulate tools and equipment safely and skillfully
- Communicate ideas verbally
- Be organized
- Be willing to work with precise limits and standards
- Walk and move around in shop and field assignments
- Lift and carry 50 pounds
- See and hear well (normal or corrected)
- Distinguish colors
- Judge depth and distance

This program is a two-year, highly technical program designed to prepare students to use critical thinking skills to explore basic diesel technology. This program is geared toward students with interest in farm related machinery. Knowledge gained in this program can be beneficial for students that decide to further their education in this related field, stay on the family farm, or go straight into the workforce for an entry level position. This program consists of practical knowledge and shop management skills to help you master installation, service, assembly, adjustment, repair, and operations of various types of farm machinery and tractors. You will also learn how to work with hydraulics, transmissions, electrical systems, and air conditioning, learn orientation and safety, engine repair, tuneup, and preventative maintenance, transmissions, brakes and diesel electrical systems.

Certifications:

Year I - OSHA Training

Year II - ASE Exams in Medium/Heavy Truck: Brakes, Inspection Maintenance & Minor Repairs, Electrical/Electronic Systems, Diesel Engines and Steering & Suspension

Project Lead the Way (PLTW) Engineering

PLTW is a nationally recognized engineering curriculum being offered in the Mexico School District. For more information see your guidance counselor or go to www.pltw.org

Engineering Essentials (EES-PLTW) (C6079)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 9, 10, 11, 12

Prerequisite: Must be enrolled in or have completed Algebra I with a C or higher.

Looking for STEM education? 3D printing? Computer Aided Drafting? Pre-engineering? The ESS course is where it starts! A full year course appropriate for students in grades 9-12, especially those 8th graders currently enrolled in Algebra or anyone ready for challenging and interesting math/science/engineering projects. Students will explore the work of engineers and their role in the design and development of solutions to real-world problems in a variety of industry sectors including health care, public service, product development and manufacturing. Student learning will center around four projects including designing a disaster relief center, designing a tool to help workers in a workplace, designing an electro-mechanical system to solve a problem, and working on an ecologically sustainable urban environment plan.

Note: THIS COURSE IS THE GATEWAY TO TAKE MANY OTHER PLTW ENGINEERING & STEM COURSES WE OFFER INCLUDING: Principles of Engineering, Computer Integrated Manufacturing, Digital Electronics and Engineering Design and Development (capstone).

Principles of Engineering (PoE) (C6231)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 11, 12

Prerequisite: Completion of Algebra I with a C or higher, completion of EES or concurrently enrolled

Through hands-on problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. Students will build a variety of machines and mechanisms, build and program robotic machines, design their own bridge structure and experiment with projectile motion. Students who complete the course will have the opportunity for college credit hours and/or scholarships.

Civil Engineering (CivE) (C6233)

Credit(s): 1.0 Credit Type: Practical Art

Grade levels: 10-12

Prerequisites: completion of Engineering Essentials; completion of Geometry with a C or better

Civil Engineering and Architecture (CEA) is a high school level specialization course in the PLTW Engineering Program. In CEA, students are introduced to important aspects of building and site design and development. They apply math, science, and engineering practices to design residential and commercial projects using 3D architectural design software. Both individually and as part of a team, students will progress from completing structured activities to solving open-ended projects and problems that require them to develop planning, documentation, communication, and other professional skills. Students will develop skills in engineering calculations, technical representation and documentation of design solutions, and use of current 3D architectural design and modeling software to represent and communicate solutions.

Computer Integrated Manufacturing (C6087)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 10, 11, 12

Prerequisite: Engineering Essentials (ESS) or an upper-class STEM motivated student with instructor approval

This hands-on class allows students to program a robotic arm, program a CNC machine, try out Laser cutting and engraving, perfect 3D drafting skills (CAD), build VEX machines, and even some 3D printing. Throughout the class students use principles of engineering, mathematics, and even learn about high-tech manufacturing principles in the real world. Whether you are a pre-engineer, interested in a bit of programming, problem solving, group & project-based learning, or just like science in general, this class could be for you

Engineering Design and Development (EDD) (C6232)

Credit(s): 1.0 Credit Type: Practical Art

Grade Level: 12

Prerequisites: Completion of EES, Principles of Engineering and one specialization course (Digital Electronics or Computer Integrated Manufacturing, Ag Diesel, Ag Science, Automotive, Computer Networking/Maintenance, Computer Science, etc.)

Have you ever wanted to work on a project you get to choose, build it and then take it to state and national competition? In this capstone course, students work in teams to design and develop an original solution to a valid open-ended technical problem of their choosing by applying the engineering design process. Students perform research to choose, validate, and justify a technical problem. After carefully defining the problem, teams design, build, and test their solutions while working closely with industry professionals who provide mentoring opportunities. Finally, student teams present and defend their original solution to an outside panel.

WELDING

Introduction to Welding (1 Hour) (C6132)

Credit(s): 1 Credit Type: Practical Art

Grade Level: 10

Welding safety, blueprint reading, welding equipment identification and operation.

Welding Technology I (3 Hour) (C6121) Welding Technology II (3 Hour) (C6122)

Credit(s): 3 Credit Type: Practical Art

Grade Level: 11, 12

Introduction to welding safety, blueprint reading, welding equipment identification and operation. Industrial welding that includes SMAW (stick welding) GMAW (mig welding) GTAW (tig welding) oxy fuel cutting, CAC (carbon arc cutting) PAC (plasma cutting). This class also includes American Welding Society code welding and opportunity for industry standard AWS welding certification.

Certification: AWS welding certification