

2023-2024 PATHWAY GUIDE



ARCADIA | ARLINGTON | CAREY | CORY-RAWSON | FINDLAY | LEIPSIC | LIBERTY BENTON | MCCOMB
MILLER CITY | OTTAWA-GLANDORF | PANDORA-GILBOA | RIVERDALE | VAN BUREN | VANLUE



EDUCATING STUDENTS AND EMPOWERING COMMUNITIES

Millstream Career Center

Pathway Guide

2023-2024

Millstream Career Center is committed to training junior & senior students in their program of study and prepares them for a career, further training, or collegiate studies upon graduation from high school. Course work consists of related classroom instruction and practical hands-on projects and experiences aimed at developing the knowledge and skills required for career success.

Development of leadership skills that are critical in today's workplace are accomplished in part through membership and participation in the following co-curricular organizations: DECA – An Association of Marketing Students, HOSA-Future Health Professionals, SkillsUSA, EdRising, and FFA – Future Farmers of America.

This course pathway guide will provide you with valuable information when choosing a program of study. Our classes will give you a jump start into your career. If you have questions, please contact our office at 419-425-8293 to speak with us. We want to ensure that your high school experience allows for opportunities beyond the traditional pathway. Take advantage of all the opportunities that are available to you and allow Millstream Career Center to be a step toward your career pathway.



Director
Millstream Career Center
1150 Broad Ave.
Findlay, Ohio 45840
419-425-8293



JUNIOR/SENIOR PROGRAM OFFERINGS

Automotive Technology

Automotive Shop Safety and Foundations, Brakes, Engine Performance, Electrical/ Electronics, Steering and Suspension

Business Essentials

Foundations of Business, Entrepreneurship, Customer Relationships, Market Research

Computer Networking & Cybersecurity

CISCO Training, Computer Troubleshooting, IT Engineering & Management; Network: Design, Installation, Maintenance & Security

Computer Programming & Software Engineering

Software Development Technology, Program Development, Acquisition of Computer Language, Program Simulation

Construction Skills

Site Preparation, Demolition & Renovation, Framing, Masonry, Electrical, Plumbing, Green Technology, Roofing

Cosmetology

Hair Styling, Coloring; Spa Techniques: Nails, Pedicure, Nail Enhancements, Nail Art, Massage, Skin Care, Make-Up Techniques

Culinary Arts

Food Safety & Sanitation, Menu Planning, Cooking Techniques, Plate Presentation, Customer Service

Engineering & Design

2-D/3-D Design in CAD Softwares, Hydraulic & Pneumatics, Electricity & Electronics, Automation & Robotics, Mechanical Systems, 2D Laser-3D Printing

Health Professions

Facility/patient infection control, safety practices, State Tested Nurse Aide Training and ODH quality of core requirements, Medical Terminology, Diversified Health Occupations, Phlebotomy

Hospitality & Restaurant Services

Food Safety & Preparation, Customer Service, Facility Maintenance, Linen Services, Housekeeping

JTC (Job Training)

Career preparation, financial literacy, business readiness, health literacy, safety, communication, customer service, problem solving, critical thinking

Media Production & Visual Design

Audio / Video Production, Broadcasting Techniques, Photography, Cinematography, Journalism

Performing Arts

Acting Performance, Acting & Script Analysis, Costuming & Makeup, Musical Theatre

Teaching Professions

Child Development, Instructional Activities, Learning Center Design, Supervision, Bulletin Board Design, Training Child Abuse, First Aid, and CPR

Welding

Welding Safety, Fabrication, Welding Engineering & Design, Sculptures, Work Based Learning (WBL)



Interested Millstream students have the opportunity to become **DUAL-ENROLLED**. Junior and Senior students in selected Tech Prep programs may register for college credit in their program area. Millstream instructors are adjunct faculty at Owens Community College and Rhodes State College will deliver curriculum content consistent with college requirements. Students will receive an official college transcript for the courses completed. This is offered at no cost to the student or home school.

Applying to the College/University

The following documents are tools to assist you in your CCP application process. Each college/university has their own steps and procedures for application as a CCP student. Each college/university also has their own deadline for steps to be completed. Please review the application steps for each college/university that you intend to apply to as a CCP student.



**Automotive Technology
Business Essentials
Culinary Arts
Engineering and Design
Health Professions**

[Owens Community College
Application Steps](#)

**Computer Networking & Cybersecurity
Computer Programming & Software Engineering
Media Production & Visual Design
Teaching Professions**

[Rhodes State College
Application Steps](#)

Intent forms are due by April 1st to your school counselor.

AUTOMOTIVE TECHNOLOGY

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Ground Transportation Maintenance	394 or 394CCP	177000	1.5 HS & 2 CCP
11	Automotive Braking Systems	395	177030	1.5 HS credits
12	Automotive Steering & Suspension Systems	494	177031	1.5 HS credits
12	Ground Transportation Electronics	495	177002	1.5 HS credits

Auto Technology I: Ground Transportation Maintenance		394 or 394CCP
Semester: 3 periods per day	Dues: \$30.00 SkillsUSA	Grade: 11
Co-requisite: Automotive Braking Systems (395)		
Industry Credential(s): ASE Student Certification-Automotive Maintenance and Light Repair (4 points)		
In this first course, students will apply the skills needed to inspect and perform general service on vehicles. Students will research applicable service information and technical service bulletins, and perform maintenance on vehicles. Students will inspect and service engine, drivetrain, suspension, steering, electrical and braking systems. Students will perform ignition maintenance including spark plug/glow plug and ignition wire and coil pack replacement. Additionally, students change fluids, filters and inspect vehicles for leaks and fluid conditions.		

Auto Technology I: Automotive Braking Systems		395
Semester: 3 periods per day	Dues: See above	Grade: 11
Co-requisite: Ground Transportation Maintenance (394 or 394CCP)		
Industry Credential(s): ASE Student Certification-Automotive Brakes (4 points)		
Students will perform inspections, troubleshoot malfunctions and service automotive undercarriage systems. Students will identify poor performing hydraulic brake systems and replace malfunctioning components. Students will install coil and leaf springs, shock absorbers and struts, and replace wheel bearings. Students will inspect and replace automotive steering components and perform wheel alignments. Additionally, students will disable and enable supplemental restraint systems (SRS) and replace anti lock brake systems components.		

Auto Technology II: Automotive Steering & Suspension Systems			494
Semester: 3 periods per day	Dues: \$30.00 SkillsUSA	Grade: 12	
Prerequisite: Ground Transportation Maintenance (394 or 394CCP) and Automotive Braking Systems (395)			
Co-requisite: Ground Transportation Electronics (495)			
Industry Credential(s): ASE Student Certification-Automotive Suspension & Steering (4 points)			
Students will perform inspections, troubleshoot malfunctions and service automotive undercarriage systems. Students will identify poor performing hydraulic brake systems and replace malfunctioning components. Students will install coil and leaf springs, shock absorbers and struts, and replace wheel bearings. Students will inspect and replace automotive steering components and perform wheel alignments. Additionally, students will disable and enable supplemental restraint systems (SRS) and replace anti lock brake systems components.			

Auto Technology II: Ground Transportation Electronics		495
Semester: 3 periods per day	Dues: See above	Grade: 12
Prerequisite: Ground Transportation Maintenance (394 or 394CCP) and Automotive Braking Systems (395)		
Co-requisite: Automotive Steering & Suspension Systems (494)		
Industry Credential(s): ASE Student Certification-Automotive Electronics/Electrical System (4 points)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal & the Industry Recognized Credential Seal		
Students will diagnose and repair vehicle electrical systems, including chassis electrical, charging, starting and lighting systems. Students will learn the fundamentals of direct current (DC) electronics including series, parallel, and series-parallel circuits. Students will use electronic diagnostic tools, read schematics, and utilize printed and electronic repair manuals to troubleshoot electrical circuits, test components and replace defective modules.		

BUSINESS ESSENTIALS

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Marketing Principles	458	144000	1 HS credit
11	Finance Foundations	358	143000	1 HS credit
12	Digital Marketing & Management	459 or 459CCP	144015	1 HS & 3 CCP
12	Strategic Entrepreneurship	460 or 460CCP	141030	1 HS & 3 CCP

Business Essentials Principles		458
Full year: 1 period per day	Dues: \$30.00 DECA Fees: \$20.00	Grade: 11
Co-requisite: Finance Foundations (358)		
This is the first course in the Marketing career field. It introduces students to the specializations offered in Marketing. Students will obtain fundamental knowledge and skills in marketing communications, marketing management, marketing research, merchandising and professional selling. They will acquire knowledge of marketing strategies, market identification techniques, employability skills, business ethics and law, economic principles and international business. Technology, leadership and communications will be incorporated in classroom activities.		

Business Essentials Finance Foundations		358
Full year: 1 period per day	Fees/Dues: See above	Grade: 11
Co-requisite: Marketing Principles (458)		
Students will obtain fundamental knowledge and skills in accounting, banking services, corporate finance, insurance, and securities and investments. They will acquire knowledge of financial analysis and application, business law and ethics, economics, international business and business relationships. Knowledge management and information technology will be emphasized. Employability skills, leadership and communications will be incorporated in classroom activities.		

Business Essentials Digital Marketing & Management		459 or 459CCP
Semester: 2 periods per day	Dues: \$30.00 DECA Fees: \$20.00	Grade: 12
Prerequisite: Completion of Marketing Principles (458) and Finance Foundations (358)		
Co-requisite: Strategic Entrepreneurship (460 or 460CCP)		
Students will apply tools, strategies and processes to communicate digitally with targeted customers. They will create, implement, and critique online advertising, email marketing, websites, social media, mobile marketing, search-engine optimization, video or images and podcasts/webcasts. Students will apply project management techniques to guide and control digital communications efforts. They will also create and repurpose content for use in digital environments. Technology, employability skills, leadership and communications will be incorporated in classroom activities.		

Business Essentials Strategic Entrepreneurship		460 or 460CCP
Semester: 2 periods per day	Fees/Dues: See above	Grade: 12
Prerequisite: Completion of Marketing Principles (458) and Finance Foundations (358)		
Co-requisite: Digital Marketing Management (459 or 459CCP)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal		
Students will use innovation skills to generate ideas for new products and services, evaluate the feasibility of ideas, and develop a strategy for commercialization. They will use technology to select target markets, profile target customers, define the venture's mission, and create business plans. Students will take initial steps to establish a business. Students will calculate and forecast costs, break-even, and sales. Establishing a brand, setting prices, promoting products, and managing customer relationships will be emphasized.		

COMPUTER NETWORKING & CYBERSECURITY

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Computer Systems	403 or 403CCP	145025	1 HS & 3 CCP
11	Cybersecurity	404 or 404CCP	146005	1 HS & 3 CCP
12	Networking	405 or 405CCP	145035	1 HS & 3 CCP
12	Routing & Switching	406 or 406CCP	145055	1 HS & 3 CCP

Networking I: Computer Systems

403 or 403CCP

Semester: 2 periods per day

Dues: \$30.00 SkillsUSA

Fees: \$10.00 for supplies

Grade: 11

Co-requisite: Cybersecurity (404 or 404CCP)

Students will learn to install, repair, and troubleshoot computer hardware systems. They will perform preventative maintenance practices and learn techniques for maintaining computer hardware security. Communication skills and professionalism in troubleshooting situations will be emphasized.

Networking I: Cybersecurity

404 or 404CCP

Semester: 2 periods per day

Dues/Fees: See above

Grade: 11

Co-requisite: Computer Systems (403 or 403CCP)

Students will research the historical perspectives and theories of education used in the forming of their own personal educational philosophy. Students will assess legal, ethical and organizational issues. Additionally, students will assess developmental appropriate practices and identify challenging issues associated with teaching children with diverse needs. Career planning, professional guidelines and ethical practices will also be emphasized..

Networking II: Networking

405 or 405CCP

Semester: 2 periods per day

Dues: \$30.00 SkillsUSA

Fees: \$10.00 for supplies

Grade: 12

Prerequisite: Computer Systems (403 or 403CCP) and Cybersecurity (404 or 404CCP)

Co-requisite: Routing & Switching (406 or 406CCP)

Students will install, configure, and troubleshoot network hardware and peripherals. Students will learn networking by exploring the OSI model, network topologies, and cabling. Students will design simple networks, know how to select physical devices, and be able to configure the equipment. Knowledge and skills relating to the operation and usage of network protocols will be developed.

Networking II: Routing & Switching

406 or 406CCP

Semester: 2 periods per day

Dues/Fees: See above

Grade: 12

Prerequisite: Computer Systems (403 or 403CCP) and Cybersecurity (504 or 504CCP)

Co-requisite: Networking (405 or 405CCP)

Industry Credential(s): Cisco Certified Network Associate - CCNA (12 points)

Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal & Technology Seal & the Industry Recognized Credential Seal

Students will learn the functions, characteristics, and operations of routers and switches. Students will learn about wireless network standards and components and the role that routers play in enabling communications across multiple networks. Students will troubleshoot the routing process. Students will examine the use of Virtual Local Area Networks (VLANs) to create logically separate networks.

COMPUTER PROGRAMMING & SOFTWARE ENGINEERING

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Information Technology	510 or 510CCP	145005	1 HS & 3 CCP
11	Programming	511 or 511CCP	145060	1 HS & 3 CCP
12	Object Oriented Programming	512 or 512CCP	145065	1 HS & 3 CCP
12	Database Applications Development	513 or 513CCP	145085	1 HS & 3 CCP

Programming I: Information Technology		510 or 510CCP
Semester: 2 periods per day	Dues: \$30.00 SkillsUSA	Grade: 11
Co-requisite: Programming (511 or 511CCP)		
This first course in the IT career field is designed to provide students with a working knowledge of computer concepts and essential skills necessary for work and communication in today's society. Students will learn safety, security, and ethical issues in computing and social networking. Students will also learn about input/output systems, computer hardware and operating systems, and office applications.		

Programming I: Programming		511 or 511CCP
Semester: 2 periods per day	Dues: See above	Grade: 11
Co-requisite: Information Technology (510 or 510CCP)		
In this course students will learn the basics of building simple interactive applications. Students will learn the basic units of logic: sequence, selection, and loop. Students will apply algorithmic solutions to problem-domain scenarios. Students will gain experience in using commercial and open source languages, programs, and applications.		

Programming II: Object Oriented Programming		512 or 512CCP
Semester: 2 periods per day	Dues: \$30.00 SkillsUSA	Grade: 12
Prerequisite: Information Technology (510 or 510CCP) and Programming (511 or 511CCP)		
Co-requisite: Database Applications Development (513 or 513CCP)		
Students will learn to represent programming concepts as "objects" that have data fields and associated procedures known as methods. Students will implement classes such as support static, instance method, inheritance, polymorphism, exception handling, and object serialization. A variety of commercial and open source programs and applications will be used.		

Programming II: Database Applications Development		513 or 513CCP
Semester: 2 periods per day	Dues: See above	Grade: 12
Prerequisite: Information Technology (510 or 510CCP) and Programming (511 or 511CCP)		
Co-requisite: Object Oriented Programming (512 or 512CCP)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal & Technology Seal		
Students will use developer strategies to manipulate data, present database systems theory, and develop database applications. Students will learn to import and export data, manipulate table properties, make advanced queries, and run basic SQL forms and reports. Students will develop macros for automating database tasks and building menu-driven applications. Knowledge and skills of data modeling, diagraming, query writing, and design theory will be developed		

CONSTRUCTION SKILLS

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Construction Technology	301	178000	1.5 HS credits
11	Carpentry & Masonry	302	178001	1.5 HS credits
12	Structural Systems	401	178003	1.5 HS credits
12	Coverings & Finishes	402	178004	1.5 HS credits

Construction I: Construction Technology		301
Semester: 3 periods per day	Dues: \$30.00 SkillsUSA Fees: \$25.00	Grade: 11
Co-requisite: Carpentry & Masonry (302)		
Industry Credential(s): NCCER Core (6 points) & OSHA 10 (1 point)		
Students will learn principles in basic safety (10-hr OSHA), construction math, hand and power tool are and operation, blueprint reading, material handling, communication and employability skills. An emphasis will be placed on safe and green construction practices.		

Construction I: Carpentry & Masonry		302
Semester: 3 periods per day	Dues/ Fees: See above	Grade: 11
Co-requisite: Construction Technology (301)		
This first course in the pathway will introduce to students the materials, methods, and equipment used in carpentry and masonry. Students will organize a project work sequence by interpreting plans and diagrams within a construction drawing set. They will lay out and install basic wall, floor and roof applications. Students will perform introductory concrete applications including formwork, reinforcement, mixing, and finishing. Current advancements in technology, safety, applicable code requirements and correct practices are learned.		

Construction II: Structural Systems		401
Semester: 3 periods per day	Dues: \$30.00 SkillsUSA Fees: \$25.00	Grade: 12
Prerequisite: Construction Technology (301) and Carpentry & Masonry (302)		
Co-requisite: Coverings & Finishes (402)		
Industry Credential(s): NCCER Level 1 - Carpentry (6 points) *Must also pass NCCER Core as prereq*		
Students will learn procedures and techniques required for layout and framing of walls and ceilings, including roughing-in door and window openings, constructing corners and partitions; bracing walls and ceilings; and applying sheathing. Students will learn methods of roof, cold formed steel, and wood stair framing. Students will learn site and personal safety, material properties, design procedures, and code requirements for structural systems.		

Construction II: Coverings & Finishes		402
Semester: 3 periods per day	Dues/Fees: See above	Grade: 12
Prerequisite: Construction Technology (301) and Carpentry & Masonry (302)		
Co-requisite: Structural Systems (401)		
Industry Credential(s): Forklift Operation (1 point)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal & the Industry Recognized Credential Seal		
<p>This course will address applications of interior and exterior finish work. Students will identify material properties and select appropriate applications. Students will install thermal and moisture protection including roofing, siding, fascia and soffits, gutters, and louvers. Students will install drywall; trim-joinery and molding and apply wall, floor and ceiling coverings and finishes. Throughout the course, the safe handling of materials, personal safety, prevention of accidents and the mitigation of hazards are emphasized.</p>		

COSMETOLOGY

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Microbiology and Infection Control	367	174115	1.5 HS credits
11	Trichology	369	174120	1.5 HS credits
12	Advanced Hair Cutting & Styling	467	174130	1.5 HS credits
12	Advanced Chemical Services	469	174140	1.5 HS credits

Cosmetology I: Microbiology and Infection Control			367
Semester: 3 periods per day		Dues: \$30.00 SkillsUSA	Grade: 11
		Fees: \$150 (Includes shear kit, mannequin, apron)	
Co-requisite: Trichology (369), Biology or Chemistry or Anatomy, and English 11, and a Math Students will learn basic bacteriology, infection control, and salon safety practices. Students will be able to recognize infectious disorders and contagious diseases, learn the dispensary requirements, product storage, and requirements of the laws and rules, which regulate the cosmetology industry in Ohio.			

Cosmetology I: Trichology			369
Semester: 3 periods per day		Dues/Fees:: See above	Grade: 11
Co-requisite: Microbiology and Infection Control (367), Biology or Chemistry or Anatomy, and English 11, and a Math Students will learn the anatomy of the head and scalp, structure of the hair and various techniques and procedures for analyzing hair, scalp disorders and diseases. Students will be able to determine hair porosity, elasticity, density, texture and growth patterns as well as conduct chemical tests for treated hair and ability to recommend corrective scalp treatment.			

Cosmetology II: Advanced Hair Cutting and Styling		467
Semester: 3 periods per day	Dues: \$30.00 SkillsUSA Fees: \$80 (includes mannequin, State Board Kit)	Grade: 12
Prerequisite: Completion of Microbiology and Infection Control (367), Trichology (369), Biology or Chemistry or Anatomy		
Co-requisite: Advanced Chemical Services (469)		
Students will learn advanced cutting and formal styling using specialized equipment and techniques. This course offers enhanced training in current trends and razor techniques.		

Cosmetology II: Advanced Chemical Services			469
Semester: 3 periods per day		Dues/Fees: See above	Grade: 12
Prerequisite: Completion of Microbiology and Infection Control (367), Trichology (369), Science (Biology Chemistry or Anatomy) Co-requisite: Advanced Hair Cutting and Styling(467) Industry Credential(s): Ohio State Board of Cosmetology - License of Cosmetology (12 points) Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal & the Industry Recognized Credential Seal Students will learn advanced chemical services using specialized products and techniques. Students will do advanced coloring, dimensional coloring, corrective techniques, texturizing, and advanced chemical wave wrapping techniques.			

CULINARY ARTS

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Fundamentals of Foods Production	388 or 388CCP	330100	1.5 HS & 2 CCP
11	Baking & Pastry Arts	389	330125	1.5 HS credits
12	Contemporary Cuisine	488	330105	1.5 HS credits
12	Dining Room Service and Operations	489	330110	1.5 HS credits

Culinary Arts I: Fundamentals of Food Production		388 or 388CCP
Semester: 3 periods per day	Dues:\$30 SkillsUSA Fees:\$60 (additional costs include black non-skid shoes)	Grade: 11
Co-requisite: Baking & Pastry Arts (389)		
Industry Credential(s): Servsafe Manager (3 points)		
Students will prepare food products and beverages according to standardized recipes. They will apply plating and presentation principles to deliver attractive menu items, establish food specifications and prep lists, and develop ingredient and portion control guides. Safety and sanitation, standard knife skills, and culinary math will be emphasized. Employability skills, leadership and communications will also be incorporated.		

Culinary Arts I: Baking & Pastry Arts		389
Semester: 3 periods per day	Dues/ Fees: See above	Grade: 11
Co-requisite: Fundamentals of Food Production (388 or 388CCP)		
Students will apply food-science principles to prepare and bake breads, desserts and pastries. They will also use specialized decorating and presentation techniques to decorate cakes, cookies, pastries, and other baked goods. Students will select quality ingredients, determine food costs, and research and develop marketable new recipes and food concepts. Personal safety, food safety, and equipment safety will be emphasized.		

Culinary Arts II: Contemporary Cuisine		488
Semester: 3 periods per day	Dues:\$30 SkillsUSA Fees:\$60 (additional costs include black non-skid shoes)	Grade: 12
Prerequisite: Completion of Fundamentals of Food Production (388 or 388CCP) and Baking & Pastry Arts (389)		
Co-requisite: Dining Room Service and Operations (489)		
Students will prepare regional and international food products and beverages according to standardized recipes. They will research and develop marketable new recipes, plan and design menus, and calculate food requirements and costs. Selection, use, maintenance and storage of commercial equipment, machines, tools and tableware will be emphasized. Food science, inventory management, food presentation, and safety and sanitation will also be addressed.		

Culinary Arts II: Dining Room Service and Operations		489
Semester: 3 periods per day	Dues/Fees: See above	Grade: 12
Prerequisite: Completion of Fundamentals of Food Production (388 or 388CCP) and Baking & Pastry Arts (389)		
Co-requisite: Contemporary Cuisine (488)		
Industry Credential(s): ProStart Certificate of Achievement (9 points)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal & the Industry Recognized Credential Seal		
Students will apply strategies and techniques to identify and meet dining guest needs. They will provide table and beverage service; maintain eating areas, meeting spaces and serving stations; manage online reservations and orders; and monitor table turns, wait lines and table assignments. Nutritional analysis, types of table service, safety and sanitation, cultural intelligence, employability skills and communications will also be addressed.		

ENGINEERING & DESIGN

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Engineering Design	826	175001	1 HS credit
11	DC Electronic Circuits	827	175105	1 HS & 3 CCP
12	Mechanisms and Drives	829 or 829CCP	175008	1 HS & 3 CCP
12	Robotics	830 or 830CCP	175004	1 HS & 2 CCP

Engineering I: Engineering Design		826 or 826CCP
Semester: 2 periods	Dues:\$30 SkillsUSA Fees: \$60 project supplies	Grade: 11
Co-requisite: DC Electronic Circuits (827 or 827CCP)		
The focus of Engineering Design is the application of the engineering design process. Topics include work-processes, optimization methods, design optimization, and risk management tools. Students will use 2D and 3D modeling software to help them design solutions to solve proposed problems, document their work, and communicate solutions. Additionally, students will interpret industry prints, and create working drawings from functional models. Emphasis is given to experimental problem solving in real systems.		

Engineering I: DC Electronic Circuits		827 or 827CCP
Semester: 2 periods per day	Dues/ Fees: See above	Grade: 11
Co-requisite: Engineering Design (826 or 826CCP)		
Students will learn the fundamental principles of electricity with emphasis on DC (direct current) circuits. They will use concepts of Ohm's Law, the Power Formula and Kirchhoff's Law with series, parallel and series-parallel circuit applications. The student will master electrical safety, breadboard wiring, basic circuit troubleshooting, operation of DC power supply and digital multimeter (DMM).		

Engineering II: Mechanisms & Drives		829 or 829CCP
Semester: 2 periods per day	Dues: \$30 SkillsUSA Fees: \$60 project supplies	Grade: 12
Prerequisite: Engineering Design (826 or 826CCP) and DC Electronic Circuits (827 or 827CCP)		
Co-requisite: Robotics (830 or 830CCP)		
Students will learn the principles and practices of machine operation and machine applications. They will learn how machine components such as gears, belts, sprockets, bearings, clutches, couplings, springs, etc. contribute to the application for which the machine is designed. They will also examine the basic drives of such mechanisms as electric motors and hydraulic & pneumatic actuators.		

Engineering II: Robotics		830 or 830CCP
Semester: 2 periods per day – 1 credit	Dues/Fees: See above	Grade: 12
Prerequisite: Engineering Design (826 or 826CCP) and DC Electronic Circuits (827 or 827CCP)		
Co-requisite: Mechanisms and Drives (829 or 829CCP)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal		
Students will apply the knowledge and skills necessary to program and operate Robots, using the teach pendant as the main interface point. The Students will learn robotic operations and system configurations. Students will code, compile, and debug programs using the robotic programming language.		

HEALTH PROFESSIONS

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Health Science and Technology	396	072001	1 HS credits
11	Medical Terminology	397 or 397CCP	072150	1 HS & 3 CCP
12	Principles of Allied Health	496	072035	1 HS credits
12	Human Pathophysiology	501 or 501CCP	072045	1 HS & 3 CCP

Health Professions I: Health Science and Technology		396
Semester: 2 periods per day	Dues: \$30 SkillsUSA Fees: \$40	Grade: 11
Co-requisite: Medical Terminology (397 or 397CCP)		
This course in the career field provides students an overview of the opportunities available in the healthcare industry. Students will learn fundamental skills in effective and safe patient care that can be applied across a person's lifespan. They will also be introduced to exercise science and sports medicine, the field of biomedical research and the importance of managing health information.		

Health Professions I: Medical Terminology		397 or 397CCP
Semester: 2 periods per day	Dues/Fees: see above	Grade: 11
Co-requisite: Health Science and Technology (396)		
This course focuses on the applications of the rules for constructing and defining medical terms with an emphasis on building a working medical vocabulary. Topics include using the appropriate abbreviations and symbols for anatomical, physiological and pathological classifications and the associated medical specialties and procedures. Students will decipher medical terms by identifying and using word elements with an emphasis on derivation, meaning, and pronunciation. Further, students will interpret and translate medical records and documents		

Health Professions II: Principles of Allied Health		496
Semester: 2 periods per day	Dues: \$30 SkillsUSA Fees: \$30	Grade: 12
Prerequisite: Health Science and Technology (396) & Medical Terminology (397 or 397CCP)		
Co-requisite: Human Pathophysiology (501 or 501CCP)		
Industry Credential(s): Ohio Department of Health State Tested Nurse Assistant - STNA (12 points)		
In this course, students will apply knowledge and clinical skills necessary to assess, plan, provide, and evaluate care to patients in various healthcare settings. Students will apply first aid principles and techniques needed for response to choking, cardiopulmonary resuscitation, and other life-threatening emergencies. Emphasis will be placed on regulatory compliance, patient safety, pathophysiology, and medical interventions. Additionally, this course introduces psychomotor skills needed to assist individuals in meeting basic human needs.		

Health Professions II: Human Pathophysiology		501 or 501CCP
Semester: 2 periods per day	Dues/ Fees: See above	Grade: 12
Prerequisite: Health Science and Technology (396) & Medical Terminology (397 or 397CCP)		
Co-requisite: Principles of Allied Health (496 or 496CCP)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal & the Industry Recognized Credential Seal		
<p>Students will identify the causes, processes, and changes in body organs and tissues that occur with human illness. Topics include identification of clinical characteristics and effects of diseases, mechanisms causing alterations in cellular activity, maintenance of cellular tissue oxygenation, fluid and electrolyte balance, neuroendocrine control of the body, and diagnostic methodology. Students will interpret and use clinical data and patient health history to assemble a comprehensive health assessment.</p>		

HOSPITALITY & RESTAURANT SERVICES

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Hospitality Fundamentals	220	330000	1.5 HS credits
11	Catering and Banquet Services	221	330025	1.5 HS credits
12	Dining Room Service and Operations	320	330110	1.5 HS credits
12	Front Office Management & Operations	321	330030	1.5 HS credits

Hospitality I: Hospitality Fundamentals			220
Semester: 3 periods per day		Dues: \$30 SkillsUSA	Grade: 11
Co-requisite: Catering and Banquet Services (221)			
Industry Credential(s): Servsafe Food Handler (1 point)			
This course will introduce students to culinary arts, foodservice operations, lodging, travel and tourism. Students will obtain knowledge of customer service principles and examine the impact of cultural, historical, social and technological developments on key segments of the industry. They will also apply safety and sanitation techniques to prevent and control injuries, illnesses and diseases in the workplace. Business law, employability skills, leadership and communications will be addressed.			

Hospitality I: Catering and Banquet Services		221
Semester: 3 periods per day	Dues: See above	Grade: 11
Co-requisite: Hospitality Fundamentals (220)		
Students will learn and train for working in banquet operations in set up and break down of function rooms. They will understand and learn how to recommend various types of food and beverage services to clients for various types of events. Customer service: food, equipment and site safety, high-volume food production will be emphasized.		

Hospitality II: Dining Room Service and Operations			320
Semester: 3 periods per day		Dues: \$30 SkillsUSA	Grade: 12
Co-requisite: Front Office Management and Operations (321)			
Prerequisite: Hospitality Fundamentals (220) and Catering and Banquet Services (221)			
Industry Credential(s): Servsafe Person in Charge (2 points)			
Students will apply strategies and techniques to identify and meet dining guest needs. They will provide table and beverage service; maintain eating areas, meeting spaces and serving stations; manage online reservations and orders; and monitor table turns, wait lines and table assignments. Nutritional analysis, types of table service, safety and sanitation, cultural intelligence, employability skills and communications will also be addressed.			

Hospitality II: Front Office Management and Operations		321
Semester: 3 periods per day	Dues: See above	Grade: 12
Co-requisite: Dining Room Service and Operations (320)		
Prerequisite: Hospitality Fundamentals (220) and Catering and Banquet Services (221)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal		
Students will develop knowledge and skills needed in the lodging industry to perform front office procedures such as checking guests in and out, orienting guests to the lodging property and reservations. They will also learn how to maintain guest rooms and public areas and develop housekeeping plan and schedules. There will be an emphasis on site safety and sanitation, customer service, people management, employability skills, leadership and communications.		

JOB TRAINING COORDINATING (JTC)

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	JTC I: Introduction to Job Training	101	990405	3 HS credits
12	JTC II: Fundamentals in Job Training	102	990410	3 HS credits

JTC I: Introduction to Job Training		101
Year: 3 periods per day	Fees/Dues: None	Grade: 11
The initial course in the Job Training Coordination pathway, a specialized community-based work experience program for students with significant disabilities that present challenges to participation in a traditional career-technical education program regardless of accommodations. This course must be taken in the first year of the program. The program utilizes a job training coordinator to match specific jobs in the community to the individual student's preferences, interests, needs and strengths. Students must be at least sixteen years old, and this program must be identified on the student's individualized education program (IEP).		

JTC II: Fundamentals in Job Training		102
Year: 3 periods per day	Fees/Dues: None	Grade: 12
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal		
The second course in the Job Training Coordination pathway, a specialized community-based work experience program for students with significant disabilities that present challenges to participation in a traditional career-technical education program regardless of accommodations. This course is taken in the second and subsequent years of the program, as applicable. The program utilizes a job training coordinator to match specific jobs in the community to the individual student's preferences, interests, needs and strengths. Students must be at least sixteen years old, and this program must be identified on the student's individualized education program (IEP).		

MEDIA PRODUCTIONS AND VISUAL DESIGN

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Creating and Editing Digital Graphics	452 or 452CCP	145100	1 HS & 3 CCP
11	Design Techniques	453 or 453CCP	145095	1 HS & 3 CCP
12	Animation	454 or 454CCP	145115	1 HS & 3 CCP
12	Video & Sound	455 or 455CCP	145110	1 HS & 3 CCP

Media Productions I: Creating and Editing Digital Graphics		452 or 452CCP
Semester: 2 periods per day	Dues: \$30.00 SkillsUSA	Grade: 11
Co-requisite: Design Techniques (453 or 453CCP)		
Industry Credential(s): Adobe Certified Professional - Photoshop CC (4 points)		
Introduces students to creating and/or editing digital images. Students will learn to create images using a variety of software tools, and will capture digital images using a digital camera and a scanner, and transfer those images to a computer for editing. Students will learn both the design and productions perspective, including creating and managing layer masks, creating color effects and improving images with adjustments layers, working with text and combining text and imagery, and using filters and layer styles to create eye-popping special effects. This is a hands on course. Classwork will contribute to a student portfolio. Photoshop is the primary software used. Students will have access to Go-Pro's and DSLR camera.		

Media Productions I: Design Techniques		453 or 453CCP
Semester: 2 periods per day	Dues: See above	Grade: 11
Co-requisite: Creating and Editing Digital Graphics (452 or 452CCP)		
Industry Credential(s): Adobe Certified Professional - InDesign CC (4 points)		
Using Adobe InDesign, students will learn techniques for transforming photographic images, through use of digital cameras, computers, and mobile devices. To accomplish this, they will learn software photo editing techniques including layering, color correction, masking, and special effects using current commercial and open source programs and applications.		

Media Productions II: Animation		454 or 454CCP
Semester: 2 periods per day	Dues: \$30.00 SkillsUSA	Grade: 12
Prerequisite: Creating and Editing Digital Graphics (452 or 452CCP) & Design Techniques (453 or 453CCP)		
Co-requisite: Video & Sound (455 or 455CCP)		
Industry Credential(s): Adobe Certified Professional - After Effects CC (4 points)		
Students will use animation and storyboarding techniques to plan the production of an animation project. Students will design from script and storyboard actions in the pre-production planning process. Students will use commercial and open source digital animation software to create finished animations, cartoons, and other short movies. They will accomplish this using animated text, character movements, voice, background sound, sound effects, camera movements, and multiple scenes.		

Media Productions II: Video & Sound		455 or 455CCP
Semester: 2 periods per day	Dues: See above	Grade: 12
Prerequisite: Creating and Editing Digital Graphics (452 or 452CCP) & Design Techniques (453 or 453CCP)		
Co-requisite: Animation (454 or 454CCP)		
Industry Credential(s): Adobe Certified Professional - Premiere Pro CC (4 points)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal & Technology Seal & the Industry Recognized Credential Seal		
Students will create professional video and audio productions for distribution in traditional and new media channels. Using Adobe Premiere, students will plan, produce, edit, and launch media products. Students will develop scripts and storyboards, compose shots and operate different camera types such as phones, DSLR's, Go-Pro's and Drones. Students will capture sounds using microphone hardware, apply special effect techniques, and edit to achieve the final product. Students will be able to use animation and graphic design for video.		

PERFORMING ARTS

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Acting Performance	317	340230	1 HS credit
11	Costuming and Makeup	318	340260	1 HS credit
12	Acting and Script Analysis	417	340225	1 HS credit
12	Musical Theatre	418	340245	1 HS credit

Performing Arts I: Acting Performance			317
Semester: 2 periods per day	Dues: \$30.00 SkillsUSA	Grade: 11	
Co-requisite: Costuming and Makeup (318)			
Meeting expectations of the casting director and audience is critical to any successful performer. This course focuses on maximizing an actor's physical and emotional expression, vocal intonation, memorization and imagination to convey stories and feelings. Whether spoken or sung, stylistic identity is reinforced. Other topics include material selection, developing a score of action for a role, sustaining a character and self and peer critique, communication, teamwork and employability skills.			

Performing Arts I: Costuming & Makeup		318
Semester: 2 periods per day	Dues: See above	Grade: 11
Co-requisite: Acting Performance (317)		
This course focuses on character design specific to makeup and costumes. Students research, render and produce masks, hats, dresses and other attire. They apply actor makeup and choose wigs or hairstyles aligned with a production script and/or purpose. Attention to detail and creative expansion, students will learn to produce deeper character development. Factors influencing character design are storyline, director concept, relationships among characters, character movement, color and stage lighting.		

Performing Arts II: Acting and Scripting Analysis		417
Semester: 2 periods per day	Dues: \$30.00 SkillsUSA	Grade: 12
Prerequisite: Acting Performance (317) and Costuming and Makeup (318)		
Co-requisite: Musical Theatre (418)		
This course combines an understanding of the relationship between actor and script. Students research major theatre genres and influences, breaking down a script to discover objectives, obstacles, tactics and character development. They create a script with scenes, plot points and characters while developing abstract and conceptual thinking.. They learn acting techniques, including imagery, personal associations and inner monologue. Students learn time management and planning principles in order to be prepared to perform a role within an original or established piece of work.		

Performing Arts II: Musical Theatre		418
Semester: 2 periods per day	Dues: See above	Grade: 12
Prerequisite: Acting Performance (317) and Costuming and Makeup (318)		
Co-requisite: Acting and Script Analysis (417)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal & Fine/Performing Arts Seal		
<p>The troupe member with abilities in music, dance and acting has “triple threat” value in musical theatre. In this course, students assume the roles of singer, instrumentalist, actor and dancer as well as director, stage manager, set designer and/or costume technician. Students learn to take and give orders to accomplish tasks. They analyze historical and current-day exemplary models of musical theatre for story line, musical arrangement and audience appeal.</p>		

TEACHING PROFESSIONS

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Child and Adolescent Development	261 or 261CCP	350035	1.5 HS & 3 CCP
11	Communities, Schools, Stakeholders	262 or 262CCP	350225	1.5 HS & 3 CCP
12	Classroom Management	333 or 333CCP	350030	1.5 HS & 3 CCP
12	Education Principles	357	350010	1.5 HS & CTAG

Teaching Professions I: Child and Adolescent Development		261 or 261CCP
Semester: 3 periods per day	Dues: \$30 Educators Rising Fees: \$20	Grade: 11
Co-requisite: Communities, Schools, Stakeholders (262 or 262CCP)		
Industry Credential(s): Child Abuse Awareness and Prevention (1 point)		
Students will examine and apply the theoretical foundations of human growth and development to children and adolescents. Additionally, learners will determine children’s learning styles; stages of social, emotional, cognitive and physical development; and needed accommodations in educational settings. Throughout the course, family and community engagement, cultural influences on learners and language growth and development will be emphasized.		

Teaching Professions I: Communities, Schools, Stakeholders		262 or 262CCP
Semester: 3 periods per day	Dues/Fees: See above	Grade: 11
Co-requisite: Child and Adolescent Development (261 or 261CP)		
Industry Credential(s): Communicable Disease Training for Child Care Program Personnel (1 point)		
Students will examine the relationship of families, communities and schools in the growth and development of learners. They will implement strategies to actively involve families and communities in child development and learning, determine community resources and services available to families and schools, and act as advocates for students and learning. Throughout the course, working with socially, culturally, linguistically diverse families will be emphasized.		

Teaching Professions II: Classroom Management		333 or 333CCP
Semester: 3 periods per day	Dues: \$30 Educators Rising Fees: \$20	Grade: 12
Prerequisite: Child and Adolescent Development (261 or 261CCP) and Communities, Schools, Stakeholders (262 or 262CP)		
Co-requisite: Education Principles (357)		
Industry Credential(s): CPR First Aid (1 point)		
Students will apply developmentally appropriate techniques to advance learners' social and emotional growth. They will create classroom environments to maximize the learning potential of each learner. Additionally, learners will create and enforce classroom rules, establish classroom routines, and model self-discipline for learners. Conflict resolution, positive discipline and behavioral-modification techniques will be emphasized throughout the course.		

Teaching Professions II: Education Principles		357
Semester: 3 periods per day	Dues/Fees: See above	Grade: 12
Prerequisite: Child and Adolescent Development (261 or 261CCP) and Communities, Schools, Stakeholders (262 or 262CP)		
Co-requisite: Classroom Management (333 or 333CCP)		
Graduation Seal(s): Eligibility for the OhioMeansJobs-Readiness Seal		
Students will research the historical perspectives and theories of education used in the forming of their own personal educational philosophy. Students will assess legal, ethical and organizational issues. Additionally, students will assess developmental appropriate practices and identify challenging issues associated with teaching children with diverse needs. Career planning, professional guidelines and ethical practices will also be emphasized.		

WELDING

Mandatory Classes				
Grade	Course Name	MCC Course #	EMIS Course #	Credits
11	Shielded Metal Arc Welding	473	176001	1.5 HS credits
11	Gas Metal Arc Welding	474	176000	1.5 HS credits
12	Gas Tungsten Arc Welding	475	176003	1.5 HS credits
12	Flux Cored Arc Welding	476	176015	1.5 HS credits

Welding I: Shielded Metal Arc Welding		473
Semester: 3 periods per day	Dues: \$30 SkillsUSA Fees: \$20 for materials Additional costs: Welding equipment, work clothes, boots	Grade: 11
Co-requisite: Gas Metal Arc Welding (474)		
Students will be able to use the Shielded Metal Arc Welding process (SMAW) to join various types of metal. They will perform multiple types of welds and joints in all positions up to and including overhead. They will select the appropriate type of electrode and adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply their quality control factors to evaluate the quality of welds.		

Welding I: Gas Metal Arc Welding		474
Semester: 3 periods per day	Dues/ Fees: See above	Grade: 11
Co-requisite: Shielded Metal Arc Welding (473)		
Industry Credential(s): American Welding Society - Certified Welder - SMAW (12 points)		
Students will use the Gas Metal Arc Welding process (GMAW) to join various types of metal. They will cut metals using oxy-fuel processes and perform multiple types of welds and joints in all positions up to and including overhead. They will select the appropriate type of electrode wire, shielding gas and adjust welding equipment based on the physical characteristics and metal properties. Students will apply quality control factors to evaluate weld quality.		

Welding II: Gas Tungsten Arc Welding		475
Semester: 3 periods per day	Dues: \$30 SkillsUSA Fees: \$20 for materials Additional costs: Welding equipment, work clothes, boots	Grade: 12
Prerequisite: Shielded Metal Arc Welding (473) and Gas Metal Arc Welding (474)		
Co-requisite: Fabrication (476)		
Students will use the Gas Tungsten Arc Welding process (GTAW) to join various types of metal. They will perform multiple types of welds and joints in all positions up to and including overhead. They will select the appropriate type of electrode, filler metal and shielding gas and be able to adjust welding equipment based on the physical characteristics and properties of the metal. Students will apply quality control factors to evaluate weld quality.		

Welding II: Flux Cored Arc Welding		476
Semester: 3 periods per day	Dues/ Fees: See above	Grade: 12
Prerequisite: Shielded Metal Arc Welding (473) and Gas Metal Arc Welding (474)		
Co-requisite: Gas Tungsten Arc Welding (475)		
Industry Credential(s): American Welding Society - Certified Welder - GMAW (12 points) & OSHA 10 (1 point)		
Graduation Seal(s): Eligibility for the Ohio Means Jobs Readiness Seal & the Industry Recognized Credential Seal		
Students will apply the knowledge and skills to safely fabricate parts by cutting, drilling, bending, shaping, forming, edging and assembling stock to drawing dimensions. They will identify weld types, fasteners, adhesives to join materials. In addition, students will learn and apply standard practices of additive manufacturing.		

* Students are eligible to participate in early placement during the second year of the program if qualified per the Work-Based Learning guidelines. Students who successfully complete both levels of the program will be qualified to take the AWS(American Welding Society) certification test.*

