

CAREER AND TECHNICAL EDUCATION

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BEDFORD CITY SCHOOL DISTRICT

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Welcome to the Career & Technical Education (CTE) Department of the Bedford School District

Our mission aligns with the Ohio Department of Education and Workforce's goal of creating a world-class education system. We aim to provide high-quality job-training opportunities that address skills shortages, stimulate business growth, and foster innovation, ultimately contributing to the nation's economic development.

Research shows that students engaged in CTE programs are more likely to graduate and pursue further education compared to their peers in traditional settings. These students often find meaningful connections between their academic studies and career aspirations, enhancing their motivation and outcomes.

Our CTE Department is dedicated to career tech education and helping our students be successful. We offer semester-long elective courses across various fields, including Family Consumer Science, Pre-engineering, Computers, and Business, starting as early as 7th grade.

At the high school level, we provide 15 career center programs of study, allowing students to earn industry certifications, college credits, and engage in leadership competitions. Additionally, our programs emphasize real-world experience through school-based businesses, interactions with industry professionals and job placement.

We are also committed to inclusivity, working alongside the special education department to offer training opportunities for students with disabilities through Job Training and Community-Based Experiences.

We are excited about the impact and growth of our CTE programs and their role in preparing students for life after graduation.

Arts and Communication Career Field

Audio & Visual Production



This is a two-year pathway of study prepares students to provide services in a variety of areas including video, audio, and television production; animation, and photography. Students are provided with opportunities to compete in Skills USA. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Audio Engineering Pathway.

11th Grade Courses

Arts and Communication Primer : The worlds of art designers, performers and media artists intersect historically, culturally and aesthetically. In this introductory course for the Arts and Communication Career Field, students learn the basics of performance, design, audio and video. They review brochures, photographs, news stories, videos and other products common to the visual, media and performing arts industries.

Audio Broadcasting: Sound is essential to broadcast journalism and advertising. Students compare and contrast how sound alone and sound combined with visuals can entertain, inform and initiate action. They generate content, record, edit, mix and produce voice and music for airwaves, podcasts and/or Internet. They adapt for analog and digital audio while adhering to Federal Communication Commission rules and regulations related to bandwidth and advertising.

12th Grade Courses

Video Production: This course focuses on video production for commercial use. Students plan and coordinate work with clients to produce projects on a tight timeline. They learn how to read and interpret a script, select and maintain equipment and combine graphics, text and special effects. Skills attained include pre-production documentation and planning; in-production audio and video recording; and post-production editing and distribution.

Digital Cinema:

Inspiration, technique and trends are the focus of this single-camera, cinema-style course. Students engage in creative storytelling through concept development, scriptwriting and storyboarding. They learn to achieve the look of film through lighting and camera technique as well as double-system audio capture. Legal and ethical aspects such as copyright and fair use guidelines are learned.

Visual Communication (ART Pathway)



Students learn basic art skills, principles of design, and how to produce attractive pieces for print and the internet. Student will be immersed in the photography field by taking two photography courses in this pathway. The Adobe Creative Suite applications are used regularly in combining traditional art techniques with digital outcomes. Students will complete competitive portfolios for both college and employment.

11th Grade Courses

Photographic Composition:

Aesthetics and techniques are essential to producing a good photograph. This course focuses on capturing and manipulating images in digital photography with some skill development in darkroom film processing, printing and enlarging. Topics include camera functions, mechanics of image capture, image manipulation, and print production. Students shoot photographs in various studio and indoor and outdoor settings.

Photography Production:

Students advance their digital photographic knowledge and skill using camera raw files with a focus on commercial use and knowledge of production software. Emphasis is on creative expression and client communications to increase marketability of product. Topics include white balance, saturation, contrast and color correcting. Students apply copyright and fair use guidelines.

12th Grade Courses

Digital Image Editing:

This course focuses on manipulating images for final output through print and Web-based production. Students obtain a brief perspective on analog image editing and delve into the world of editing digital photos, illustrations and other artwork. They learn to adjust resolution and exposure, modify color, compress data and format and manage files. Students will use problem-solving strategies and work collaboratively to complete the creative process with artists, printers and Web developers.

Multi-Media Web Production:

The focus of this course is on merging different types of media on the Internet. Students combine text, still photography, audio, videography and graphic arts to create interactive Web pages. They demonstrate creative, digital storytelling accessible from multiple platforms. Students learn project management and marketing. They learn how to create Web content that is accessible by individuals with visual disabilities.

Business Administration & Administrative Services Career Field

Business Management Pathway



In this pathway, students will learn core management principles while completing projects in the classroom that simulate an office environment. Students develop competency in such topics as entrepreneurship, business communication, project management, and operations management, as they learn what skills are needed to start their own business. Students also develop their technology skills by learning and utilizing real world business software applications. Each student is assigned a computer and will learn business software including Microsoft Excel, Access, PowerPoint and Word as they complete business related projects and simulations. Leadership skills are developed through mandatory participation in Business Professionals of America (BPA), where students have a chance to compete against their peers from other schools at the local and state level in business applications. This course is designed for all students, college bound and career entry. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Business Management Pathway.

11th Grade Courses

Fundamentals of Business and Administration Services

This is the first course specific to the Business and Administrative Services career field. It introduces students to the specializations offered in Business and Administrative Services. Students will obtain fundamental knowledge and skills in general management, human resources management, operations management, business informatics and office management. They will acquire knowledge of business operations, business relationships, resource management, process management and financial principles. Students will use technological tools and applications to develop business insights.

Office Management

Students will simulate an office environment, using office equipment as they complete real world projects developing skills needed to manage people and information. They will learn and use Spreadsheets, Database, PowerPoint and Word Processing to complete business projects typically, as well as create, analyze, understand and manage business records. Students develop leadership and communications skills needed in management, learning to create reports, and other professional correspondence required in the real world. Career awareness will also be included in this course.

12th Grade Courses

Management Principles

Students will learn to manage a workforce, lead change, and build relationships with employees and customers, using technology to analyze the internal and external business environment, determine trends impacting business, and examine risks threatening organizational success. Ethical challenges, project management and strategic planning will also be addressed.

Operations Management

Students will learn to plan, organize, and monitor day-to-day business activities. They will use technology to plan production activities, forecast inventory needs, and negotiate vendor contracts. Students will also calculate break even, set cost volume profit goals, and develop policies and procedures to promote workplace safety and security. They will design sustainability plans, including planning for quality improvement. Corporate social responsibility, ethics, risk management and compliance will be emphasized. Membership in the student organization, Business Professionals of America (BPA) is required.

Education & Training Career Field

Teaching Professions Pathway



This pathway helps to prepare students to enter into the teaching profession. The Teaching Professions' program is designed for students who are interested in a teaching, school administration, or guidance counseling career. This career pathway will help students learn more about future career options, while their field experience and coursework provide a solid foundation for a successful teaching career. Students are exposed to teaching careers and the education system through simulations, "hands-on" activities, and observations. Students will learn how to prepare to be a teacher in a future career. Content also includes a study of the legal and social issues surrounding public education. Students will gain a background in child development and learning theory. In addition to the curriculum components, all students are required to participate in a field experience in a public school classroom for approximately 5 weeks. Students will develop a professional portfolio that will summarize their field and classroom experiences. Due to the high percentage of teachers approaching retirement age in the next 5 years, it is estimated that more than 2.5 million teachers will be needed in the U.S. and about 57,000 K-12 openings in Ohio. Students are provided with opportunities to compete in Educators Rising. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Teacher Professions.

11th Grade Courses

Foundations of Education and Training:

In this first course in the career field, students will examine the goals of education and training as well as environments in which education and training are delivered. They will identify learners' and stakeholders' roles, rights and responsibilities in educational systems; assess legal and ethical issues related to education; and determine careers of interest in education and training. Employability skills and state requirements for becoming an educator will also be addressed.

Child and Adolescent Development:

Students will examine and apply the theoretical foundations of human growth and development to child 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.

12th Grade Courses

Education Principles:

In this first course in the pathway, 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.

Communities, Schools and Stakeholders:

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.

Engineering & Science Technologies Career Field



Engineering Pathway

This pathway is designed to provide a foundation in Engineering Design. The program offers classroom, laboratory, and hands-on learning. Students are engaged in an instructional program that integrates academic and technical preparation that will prepare them for the workforce. Students will receive hand on experiences as well as career exploration in work based learning opportunities that emphasizes real world, relevant experiences in engineering technology and design. Students are provided with opportunities to compete in Skills USA. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Engineering Pathway.

11th Grade Courses

Engineering Principles:

This course will introduce students to fundamental engineering concepts and scientific principles associated with engineering design applications. Topics include mechanisms, energy statics, materials and kinematics. Additionally, students will learn material properties and electrical, control and fluid power systems. Students will learn to apply problem solving, research and design skills to create solutions to engineering challenges

Engineering Design:

Students will learn 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 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.

12 Grade Courses

Robotics:

Students will apply the knowledge and skills necessary to program and operate robots, using the teach pendant as the main interface point. Students will learn robotic operations and system configurations. Students will code, compile and debug programs using the robotic programming language.

Manufacturing Operations:

Students will learn the production processes applied across manufacturing operations. Students will be able to demonstrate a broad array of technical skills with an emphasis given to quality practices, measurement, maintenance and safety.

Health Science Field

Clinical Health Pathway

This educational career driven pathway will prepare and build confidence in students venturing into the healthcare/medical fields. It allows students to directly enter the workforce after graduation and/or continue their post secondary education goals. Students will learn the basic roles and educational requirements of doctors, nurses, and other healthcare professionals including but not limited to anatomy, physiology, medical terminology, infection control, therapeutic communication, medical law and ethics; while mastering hands-on skills needed to assist with exams and procedures and care of patients. During their second year, students will complete CPR & First Aid training with BLS certification, and the Ohio Nurse Aide Training Program, and are eligible to take the test to become a State Tested Nursing Assistant (STNA). They will gain real-world experience in healthcare by working alongside doctors, nurses, and other medical professions as they complete clinical rotations and/or work-study requirements. Students are provided with opportunities to compete in HOSA. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Clinical Health Pathway.



11th Grade Courses

Health Science and Technology

This is the first course in the health science pathway. It will provide students an overview of the communication, ethics and law in healthcare, information technology, culture, organizational structure, some body systems, basic medical terminology, safety, wellness, pharmacology terms, nutrition, dental care, infections control, end of life, basic laboratory tests. Patient care skills are reviewed in preparation for the Patient Centered Care course and STNA exam.

Medical Terminology

This course will build upon previous medical term lessons from last year, but a new student should be able to learn the same knowledge with motivation to learn medical terminology. Medical terminology is similar to learning a foreign language. Students are given rules, frequent repetition of writing, defining, and using the terms, which will aid them in knowing medical terminology. During this course assignments are given on body systems, Pharm terms, systems, and medical specialties, Infection control, microbiology taxonomy basics, health information technology, Law and healthcare, HIPPA, electronic health records defined.

12th Grade Courses

Patient Centered Care

This course will build upon the health science and technology course. There is some repetition and continuation of knowledge in similar areas, but more depth and comprehension will be gained. Students will discuss careers and skills to keep the position, communication, ethics and law, informational technology, culture, employee performance, human body function and pathophysiology, medical terminology, Safety and infection control, wellness and immunizations, CPR and AED skills (not CPR certifications), nutrition and drugs, exercise and range of motion. You learn to assist patients in activities of daily living (personal hygiene & grooming). Students will learn patient care skills, temperature, pulse, respiration, IV, blood sugar test, and etc. During this course you will have the option to test for your STNA.

Mental Health

This course is the last course in the Health Science pathway. Students will learn mental diseases as well as how to recognize and treat the signs and symptoms of mental illness and substance abuse. We cover the following additional topics: nervous, sensory and endocrine system, endocrine systems, levels of consciousness, medical terminology, safety, disasters, chemical restraints, pharmacology terms, healthcare systems, medical specialists, communication, infections control and isolation, psychosocial and crisis intervention, end of life care, health information, confidentiality, and electronic health record defined.

Sports Medicine and Exercise Science

This pathway is designed to teach students components of Exercise Science and Sports Medicine including: detailed anatomy, injury evaluation, management, & rehabilitation. Health careers associated with Exercise Science and Sports Medicine, such as physical therapy & athletic training, will be explored. Students learn the elements of first aid & experience firsthand the prevention, evaluation, & treatment of injuries. Students will learn correct procedures for: including taping/wrapping for sports injuries, first aid, emergency care, rehabilitation of injuries and use of therapeutic exercise/modalities. Students are provided with opportunities to compete in HOSA. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Exercise and Sports Medicine Pathway.

11th Grade Courses

Exercise and Athletic Training

In this first course students will apply procedures and techniques used in athletic training and in the care and rehabilitation of athletic injuries and therapeutic exercise. Topics include injury prevention, conditioning, and wound care techniques of the musculoskeletal system. Students will learn techniques in the analysis of mechanical factors related to human movement. In addition, current trends, technology, legal considerations, and the role of exercise science in relationship to other health fields will be emphasized.

Athletic Injuries and Prevention

Students will identify signs and symptoms of injury and apply emergency procedures and techniques used in the immediate care of athletic-related trauma. Students will learn clinical and field evaluative processes, injury prevention techniques, conditioning techniques, treatment, taping, bracing, and rehabilitation of musculoskeletal injuries and conditions. Students will design and implement conditioning programs, including nutritional considerations and ergogenic aids. Emphasis is placed on the synthesis of information gathered through injury history, observation, and manual muscle testing.

Human Anatomy and Physiology

In this course, students will demonstrate knowledge of body systems with emphasis on the interrelationships between structure and physical function. Students will analyze and evaluate how the body systems respond to physical activity, disease, and aging. Students will use data acquisition software to monitor abnormal physiology and body functions (e.g., muscle movement, reflex, respiratory, and voluntary actions). Further, students will analyze descriptive results of abnormal physiology and evaluate clinical consequences.

12th Grade Courses

Fitness Evaluation and Assessment

Students will complete comprehensive fitness evaluations and develop individualized training programs. Students will administer lab and field tests of cardiovascular endurance, body composition, joint flexibility and muscular strength, power, and endurance. Emphasis is placed on assessing body composition, neuromuscular flexibility, agility, balance, coordination, and proprioception. Additionally, students will identify components of physical fitness and communicate how physical activity impact health and wellness.

Nutrition and Wellness

Students will increase their knowledge of comprehensive health and wellness. Students will be able to identify the components of fitness and communicate the relationship between physical fitness, physical performance, injury prevention, and nutritional intake. Students will evaluate an individual's state of nutrition based upon the impact of personal choices and social, scientific, psychological and environmental influences. Further, students will calculate an individual's kilocalorie burn rate and recommend an ideal diet and physical fitness plan.

Project Lead the Way (PLTW) / Biomedical Science

The Biomedical Science program is a two-year program based on Project Lead the Way (PLTW) curriculum. The goal of PLTW programs is to have students develop in-demand, real-world knowledge and skills necessary to thrive in life beyond the classroom. Students will develop valuable, life-long problem solving and communication skills. Students are provided with opportunities to compete in HOSA. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Biomedical Science Pathway.

In the Junior Year, students explore the concepts of biology, anatomy and physiology, genetics, microbiology, epidemiology and medicine. Over the course of the Junior Year, students will take on roles of different medical and biomedical professionals to solve real-world problems. Students are challenged to diagnose and propose treatments for patients, perform forensic analysis, contain a medical outbreak and collaborate to design solutions to local and global medical problems.

In the Senior Year, students explore the concepts of immunology, surgery, genetics, pharmacology, medical devices and diagnostics. Over the course of the Senior Year, students explore how to detect and fight infection, screen and evaluate DNA, evaluate cancer treatment options and have the opportunity to work on an independent research project.

Over the course of both years, students will gain laboratory skills, clinical skills, scientific experimentation skills, design process skills and professional skills. The Biomedical Science program explores nearly 100 careers associated with the biomedical field. Students will also be required to complete work-based learning (WBL) hours. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Bio-Med Pathway.

Prerequisites: Biology and it is strongly recommended that Chemistry should be taken before starting the program or Chemistry can be taken concurrently.

11th Grade Courses

PLTW Principles of Biomedical Science (Principles and Practices of Biomedical Technology)

In this first course in the PLTW Biomedical Science pathway, students explore concepts of biology and medicine as they take on roles of different medical professionals to solve real-world problems. Over the course of the semester, students are challenged in various scenarios including investigating a crime scene to solve a mystery, diagnosing and proposing treatments to patients in a family medical practice, to tracking down and containing a medical outbreak at a local hospital, stabilizing a patient during an emergency and collaborating with others to design solutions to local and global medical problems. Students will gain laboratory skills, clinical skills, scientific experimentation skills, design process skills and professional skills.

PLTW Human Body Systems (Human Anatomy and Physiology)

In this second course in the PLTW Biomedical Science pathway, students examine the interactions of human body systems as they explore identity, power, movement, protection and homeostasis in the body. Over the course of the semester, students will be exploring science in action by building organs and tissues on a skeletal Maniken®, using data acquisition software to monitor body functions and will be taking on the roles of biomedical professionals to solve real-world cases. Students will solve problems that require them to develop planning, documentation, communication and other professional skills such as laboratory skills, clinical skills and scientific experimentation skills.

12th Grade Courses

Medical Interventions (Genetics of Disease) Students gain knowledge and skill in genetic principles and molecular methods of analysis. Topics include enzymology, protein purification, and gene expression and organization. Students perform biomolecular applications using knowledge of nucleic acid structure and function, DNA replication, transcription, translation, chromosome structure and remodeling and regulation of gene expression in prokaryotes and eukaryotes. Additionally, students will use electrophoresis to separate nucleic acids and proteins to determine molecular weight.

Biomedical Innovations (Biotechnology for Health and Disease) This course explores techniques for extracting, separating, and assaying carbohydrates, lipids, and proteins from biological samples. Topics include mechanisms for regulating metabolism and gene expression. Students will describe the morphology and process of reproduction of microorganisms important in clinical disease and biotechnology applications. Students will perform assays as a diagnostic tool to detect the presence of a pathogen. Further, students will perform separation techniques including chemical separations, centrifugation, distillation, and filtration and interpret results.

Hospitality & Tourism



Culinary Arts & Restaurant Management

The Bedford Culinary Arts Pathway partners with Cuyahoga Community College (Tri-C) in a two-year, ProStart Certification Course that provides you with basic culinary essentials and foodservice management skills including customer relations, cost controls, basic accounting principles, marketing, purchasing, inventory, team building skills, and communications. The Hospitality: Culinary Arts Pathway is a great fit for students who want to learn how to cook, understand management, or want to own their own restaurant. This pathway will help develop the skills needed to prepare a restaurant menu, provide excellent customer service and be a chef. Students will experience lessons in food preparation, safety and sanitation, baking basics, culinary math, and food history. Students will participate in a student - run restaurant, work experience multiple certifications. Students are provided with opportunities to compete in ProStart. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Culinary Arts and Restaurant Pathway.

11th Grade Courses

Hospitality Fundamentals:

This first course in the career field 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.

Fundamentals of Food Production:

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.

12th Grade Courses

Dining Room Service and Operations Subject:

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.

Restaurant Management Subject Code:

Students will apply management principles to plan, organize and direct restaurant staff toward goal achievement. They will hire, train, and supervise employees; establish processes to facilitate restaurant operations; and plan and design menus. Students will also forecast and schedule food production, establish food specifications, select vendors, calculate costs, and purchase food and nonfood products. Other topics include food science, nutritional analysis, business law and ethics, economics and marketing.

Human Service Field



Barbering

The Application of barbering techniques is applied to clients. Students will analyze the fundamentals of barbering and shaving in order to provide client services. Barbering Students will explain and apply barbering concepts to clients. Students will learn the principles of shaving and apply these principles to perform client services.

Human Services:

The capstone course provides opportunities for students to apply knowledge, attitudes and skills that were learned in Human Resources program in a more comprehensive and authentic way. Capstones often include project/problem based learning opportunities that occur both in and away from school. Under supervision of the school and through community partnerships, students may combine classroom learning with work experience. This course can be delivered through a variety of delivery methods including cooperative education or apprenticeship.

Cosmetology

In this introductory course, students study hair, skin, and nails and their related care. Students spend a significant time learning theory as they prepare to practice procedures in a clinical lab setting or classroom, using manikins for manipulative skill practice. The first-year course emphasizes personal safety, professionalism, and sanitation and disinfection of equipment and facilities. Students develop skills in shampooing and conditioning hair, as well as styling and cutting hair. They are introduced to chemical texture services and develop skills in manicure and pedicure procedures. Students will also be required to complete work-based learning (WBL) hours. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Cosmetology Pathway.

11th Grade Classes

Fundamentals of Hair Cutting and Styling:

Students will learn basic shampooing, conditioning and haircutting including trimming, wet styling and thermal styling techniques when working with natural and synthetic hair. Students will also learn infection control and safety along with the science of ergonomics.

Fundamentals of Chemical Services:

Students will apply basic skills, knowledge, and safety practices when giving permanent/chemical waves, curl re-forming, chemical relaxers and hair color techniques to include tinting, highlighting, bleaching, and foiling.

12th Grade Classes

Advanced Hair Cutting and Styling:

Students will learn advanced cutting and formal styling using specialized equipment and techniques. This course offers enhanced training in current trends and razor techniques.

Advanced Chemical Services:

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.

Information Technology Field



Cybersecurity Field

The Cybersecurity program provides students with knowledge and skills in computer maintenance and repair, the cybersecurity life cycle, incident handling and networking. Successful students will be prepared to take certification exams for CompTIA's A+ and Networking +, the gateway certifications for careers in IT and Cybersecurity.

Cyber One:

This is the first course in the Paradigm Cybersecurity curriculum program. Students do not need any prior knowledge in cybersecurity or computer science. They will focus on technical knowledge and professional skills. They will experience hands-on learning through the CYBER.ORG Cyber Range, development of Cyber Mindsets and work with industry subject matter experts.

Cyber Two:

This is the second course in the Cyber Program. Cybersecurity 2 is heavily aligned with the CompTIA Security+ Certification with the goal of students earning their Security+ Certification before graduation. Students can expect more opportunities for real-world learning through labs, access to cyber ranges, industry mentors, job shadowing, and presentations by cyber experts. Students will deepen their understanding of cybersecurity through participation in national cybersecurity competitions. Cybersecurity 2 also includes dual enrollment opportunities.

Cyber Three:

The third course in the Paradigm Cybersecurity program is designed as a capstone for the program. Students will focus on a specific area or areas of cybersecurity. Students will determine this area of focus through the coaching of industry mentors and the classroom teacher. Some of these topics include; Ethical Hacking, Cyber Forensics, Pen Testing, Cloud Security and many other options. Students will also have the opportunity to earn Dual Credit in this area of focus. Beyond technical skills, students in Cybersecurity 3 will also get targeted coaching in resume building, interviewing, building a personal brand, college advising and job coaching. Cybersecurity 3 will also have numerous opportunities for job shadowing and internships, along with other outside of school industry experiences.

Law and Public Safety Career Field

Criminal Justice



In this career technical pathway, Students develop both mind and body using advanced self-defense tactics and fitness training while researching and analyzing current trends and issues in civil and criminal law. Successful program graduates will earn state recognized credentials (OPOTA) and find immediate opportunities upon graduation for employment along with furthering their education via school or industry. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Criminal Justice Pathway.

11th Grade Courses

The American Criminal Justice System:

This first course in the Criminal Justice pathway traces the history, organization, and functions of local, state, and federal law enforcement. Students will study criminal behavior and apply constitutional and criminal law to crime and punishment. Students will learn law enforcement terminology, classifications and elements of crime, and how various court systems are used to judge and punish offenders.

Security and Protective Services:

Private Security is an ever-expanding industry that requires trained professionals that can detect, deter, and investigate crime. The course focuses on private security measures used to protect lives, property, and proprietary information. Students completing the Ohio Peace Officer Training Academy Private Security curriculum provided by an approved instructor will be eligible to sit for the OPOTA certification exam as a private security guard.

12th Grade Courses

Police Work and Practice in Public Safety:

In this course, students will learn the skills necessary to prevent, detect and react to crime. Students will learn self-defense and subject control techniques, methods to conduct patrols, surveillance, and traffic procedures. Students will understand the ethical and legal responsibilities of police officers on patrol. Additionally, students will learn the operations of police and emergency telecommunication systems.

The Correctional System and Services:

The correctional officer plays a critical role in the criminal justice system. In this course students will learn institutional rehabilitation and community corrections strategies that prepare them for work in a correctional setting. The student will learn the role and responsibilities of a correctional officer including processing inmates, maintaining security in a correctional setting, and understanding inmate mental health needs.

Fire and EMT

In this exciting highly challenging CTE pathway, you will learn about the science of firefighting, fire prevention and the safety and hazards associated with fires. You will study the behavior, suppression, compartmentalization and investigation of fire and its related emergencies, and all the associated training of an Emergency Medical Technician. Students will spend their senior year on the campus of Cuyahoga Community College Fire Academy earning college credit and the opportunity to become certified Firefighters and Emergency Medical Technicians.

11th Grade Courses

Foundations of Firefighting and Emergency Medical Services:

Fire Fighting and Emergency Medical Services introduces students to the foundational concepts of firefighting safety and emergency medical services. Students will analyze and practice skills outlined in the Ohio Department of Public Safety Fire protection and Ohio Emergency Medical Services rules and regulations in preparation for Firefighter I&II curriculum and EMT licensure.

12th Grade Classes

Emergency Medical Technician:

Emergency Medical Technicians are first responders who provide basic medical care to sick and injured people. In this course, students will learn the knowledge and skills necessary to provide lifesaving first aid. Students will assess, diagnose, and treat a variety of illnesses and injuries in the process of providing pre-hospital care. Students who successfully complete this course at a chartered institution will be eligible to take the National Registry Exam for Ohio EMT certification.

Firefighter I:

The Firefighter I course prepares students for a career in the fire service. Students learn the history of firefighting, ground operations, fire science, fire suppression, use of protective equipment, rescue equipment, tools and appliances. Students will apply knowledge by training with fire equipment, live fire exercises, and practicing a variety of rescue situations. Students that successfully complete this course at a chartered institution will be eligible to take the Ohio Firefighter I certification test.

Firefighter II:

The Firefighter II course builds on the knowledge and skills learned in Firefighter I. In this course students will apply knowledge and skills to advanced training in fire suppression, fire science, rescue, equipment, tools, appliances, and hazardous materials operations. Students who have completed Firefighter I and successfully complete this course at a chartered institution will be eligible to take the Ohio Firefighter II certification test.

Marketing Field

Marketing Pathway



Do you want to start your own business? Are you creative? If so, the Marketing Program is for you. You will learn about business management, entrepreneurship, and other careers in business. Marketing helps turn everyday products into household names. Marketing helps companies create their brand. You will learn how to identify potential customers, develop campaigns that generate interest and drive spending. You will work product development, customer service, and social media. In this pathway you will have the wonderful opportunity to run the Bedford High School school store. Through work based learning and regional and national competitions, you can test your ability to pitch your product or service effectively. Students are provided with opportunities to compete in DECA. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Marketing Pathway.

11th Grade Courses

Marketing Applications

Students will develop and implement marketing strategies and techniques across marketing functions: channel management, marketing research, market planning, pricing, product/service management, and branding. They will use marketing operations, procedures and activities to ensure marketing's efficiency and effectiveness. Students will generate, screen, and develop new product ideas. They will predict economic trends and conditions and determine how cultural intelligence can impact organizations. Technology, employability skills, leadership, and communications will be incorporated into classroom activities.

Digital Marketing

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 into classroom activities.

12th Grade Courses

Merchandising & Buying-

With an attached class period for students to work in the school store, currently slated to run periods 6, 7th, and 8th. This will incorporate the WBL component. Students will determine what to buy, when to buy, how much to buy, and from whom to buy products for resale. They will develop a product mix and apply display and visual merchandising techniques. Students will also implement sales support activities, process sales, track products, and plan merchandise flow. Students will establish and grow positive customer relationships. Technology, employability skills, leadership, and communications will be incorporated into classroom activities.

Strategic Entrepreneurship

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.

TRANSPORTATION SYSTEMS CAREER FIELD



Automotive Technology Pathway

The automotive technology pathway prepares students with the skills needed to enter the transportation industry or carry their skills over to a post-secondary institute. Students will study basic engine, engine performance, brake systems, electrical systems, fuel injection, ignition system, charging system, suspension, alignments, as well as automotive computer systems. Upon successful completion of the course, students are eligible to take the ASE student certification for the courses the student completes. These certifications provide students with national credentials that make them more employable.

Students will participate in SkillsUSA, which is a partnership of students, teachers and industry working together to ensure America has a skilled workforce. SkillsUSA provides educational programs, events and competitions that support career and technical education (CTE) in the nation's classrooms. Students are provided with opportunities to obtain work-based learning, college credits, graduation seals, and college credits. Please refer to the charts in the booklet for college credits and certifications for the Automotive Technology Pathway.

11th Grade Courses

MAINTENANCE

In this course, students will apply skills needed to inspect and perform general service on vehicles. Students will research applicable safety protocols, service information and technical service bulletins, and perform maintenance on vehicles. Students will inspect and service basic engine, drive train, suspension, steering, 3 electrical and braking systems. Students will perform basic vehicle maintenance including but not limited to fluid changes, tires, flat repairs, filter replacements, tune ups and more.

Automotive Brake Systems

Students will perform inspections, troubleshoot malfunctions and service automotive brake systems. Students will identify poor performing hydraulic brake systems and replace malfunctioning components. Additionally, students will disable and enable supplemental restraint systems (SRS) and replace anti lock brake systems components.

12th Grade Courses

Electrical/Electronic 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 wiring diagrams, and utilize printed and electronic repair manuals to troubleshoot electrical circuits, test components and replace defective modules. Students will diagnose and repair vehicle electrical systems, including chassis electrical, charging, starting and lighting systems.

Engine Performance

Students will research vehicle service histories using model specific service bulletins. Students will test and diagnose engine performance in fuel, air induction and exhaust systems using advanced testing procedures. Topics include computerized engine controls including retrieving and recording diagnostic trouble codes using On Board Diagnostics (OBD). Additionally, students will diagnose drivability and emissions problems resulting from malfunctions of interrelated systems.

Job Training

Authentic Work Opportunities, Both School-Based and Community-Based | Daily Job Skill-Related Lessons | Service Projects and Community Outings | Simulated Work Settings

Program Description

The Job Training Program is a two year training program that requires a special recommendation from the student's school counselor.

The Job Training Program assists students in understanding their abilities, provides work opportunities that will help a student work to their individual potential, and helps students match their goals with realistic training programs, employment opportunities, and independent living options.

Students learn basic work skills such as following written or sample directions; staying on task; working with good speed and quality in order to meet deadlines; being on time and staying on schedule; and soft skills such as appropriate communication with co-workers, supervisors, and employees from other departments.

Student LEADERSHIP Development

CAREER-TECHNICAL STUDENT ORGANIZATION (CTSO)

Each program provides students with co-curricular CTSO opportunities integral to curriculum, instruction and assessment.

Business Professionals of America



Business Professionals of America is the premier CTSO (Career and Technical Student Organization) for students pursuing careers in business management, information technology, finance, office administration, health administration and other related career fields. Students enrolled in the Business Management pathway are eligible for membership.

DECA - An Association of Marketing Students



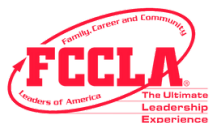
DECA prepares emerging leaders and entrepreneurs for careers in marketing, finance, hospitality and management in high schools and colleges around the globe. Students enrolled in the Marketing pathway are eligible for membership.

Educators Rising



Educators Rising helps to cultivate a new generation of highly skilled educators by guiding young people on a path from high school through college and into their teaching careers. By working with aspiring educators who reflect the demographics of their communities and who are passionate about serving those communities through public education, Educators Rising is changing the face of teaching. Students who are enrolled in the **Teachers Academy** are eligible for membership.

Family, Career and Community Leaders of America (FCCLA)



Family, Career and Community Leaders of America® (FCCLA®) is a national Career and Technical Student Organization (CTSO) for students in Family and Consumer Sciences (FCS) education in public and private school through grade 12. FCCLA® offers intra-curricular resources and opportunities for students to pursue careers that support families. Students enrolled in the **Culinary Arts** pathway are eligible for membership.

Health Occupations Students of America (HOSA)



HOSA provides a unique program of leadership development, motivation, and recognition exclusively for secondary, postsecondary, middle school, adult, and collegiate students enrolled in health science education and biomedical science programs or have interests in pursuing careers in health professions. HOSA is 100% health care! Students enrolled in BioMed (PLTW), Clinical Health, Exercise & Sports Medicine, and Pharmacy Technician pathways are eligible for membership.

Skills USA



SkillsUSA is America's proud champion of the skilled trades. We're a student-led partnership of education and industry that's building the future skilled workforce our nation depends on with graduates who are career ready, day one. Students who are enrolled in Auto Technology, Criminal Justice and Fire & EMT pathways are eligible for membership.

Types of Industry-Recognized Credentials

Taken from the ODEW Site.

Education- and work-related credentials are important milestones for many career pathways. Businesses in virtually every industry are struggling to find qualified workers who have the academic, technical and professional skills to consistently excel and succeed in the workplace. Industry-recognized credentials are valuable to employers because they help them determine the skill or education level of job applicants without having to perform an assessment. There are many different types of industry-recognized credentials offered or awarded by various types of organizations.

The Department's approved list of industry-recognized credentials encompasses the following types of credentials:

- **Occupational Licenses** are typically awarded by state government agencies and often are required for a specific position.
- **Certifications** indicate mastery of or competency in specific knowledge, skills or processes that can be measured against a set of accepted industry standards. These are not tied to a specific education program but are typically awarded through assessment and validation of skills in cooperation with a business, trade association or other industry group. After attaining a certification, individuals often must meet ongoing requirements to maintain the certification.
- **Certificates** are earned by individuals who successfully complete a training, course or series of courses. Skill certificates are issued for specific skill sets or competencies within one or more industries or occupations and may be credentials that are:
 - Desirable but are not required.
 - Part of the hiring criteria but are not associated with any critical job tasks.
 - Certificates of attendance or participation for training.

The value of the industry-recognized credential is based on employer demand and/or state regulations provided in statute.

Types of College Credits for Career Tech

College Credit Opportunities Career-Technical Education not only prepares students for the workforce, but also allows them to start on their post-secondary path.

There are several options for providing students opportunities to earn accelerated and dual enrollment credit:

Career-Tech Assurance Guides, bilateral agreements, and College Credit Plus.

CTAGs provide free direct college transcript credit for the associated equivalent college course at any in-state, public university upon matriculation.

Bilateral agreements are established with specific partner universities to provide credit for any agreed upon coursework.

CCP courses, like CTAGs, provide transcript credit for the college course at any in-state, public university upon matriculation.