







PONTIAC SCHOOL DISTRICT

Career & Technical Education Course Guide



EDUCATE, EMPOWER, EXCITE!

## A MESSAGE FROM THE SUPERINTENDENT

Greetings Pontiac School District Students and Families,

We're so excited to offer youour current course selections for our Career Pathways programs!

Our Career Technical Education program is one of the most comprehensive available in our region.

We have been honored by the National Association of School Boards for our innovation and success in this arena, and we are proud of the exceptional achievements of our students in these programs throughout their time in the district and following graduation.

Our pathways students can gain real world experience working in some of the leading companies within their chosen fields. Many of them graduate with job opportunities already in place, and all complete their high school education with a better understanding of the industries they are interested in pursuing.

We look forward to continuing this journey with you and further expanding opportunities in these areas to serve our students!

Sincerely,

CHOOL DISTRICT OF

OF PONTIAN

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Kimberly Leverette

Dr. Kimberly Leverette Interim Superintendent | Pontiac School District

# A MESSAGE FROM THE DISTRICT CTE ADMINISTRATOR

Greetings, Pontiac School District Students and Families.

As the District Administrator for the Career and Technical Education Programs for the Pontiac School District, I am pleased to present to you our updated course guide for all CTE Programs and Courses at Pontiac High School.

As a product of, and also having been a classroom teacher in Family and Consumer Sciences (FACS) Education and the Family, Career, and Community Leaders of America (FCCLA), the Career and Technical Student Organization (CTSO) within



Family and Consumer Sciences, one of the branches of Career and Technical Education, I know firsthand how important CTE Education is for all students, no matter what branch or pathway your student chooses to go into.

Pontiac High School has some well established Career and Technical Education Programs including Engineering & Manufacturing, Business and Finance and JROTC just to name a few, but I am proud to announce the expansion of our department to include new pathways including our Education & Human Services (Teacher Cadet) Pathway & our partnership with Oakland University, and our Emergency Services/Public Safety Pathway and our partnership with Oakland Community College, both of which will be Dual Enrollment Programs.

Our goal in the CTE Program at Pontiac High School is to set our students up for whatever they choose to do after graduation, including college courses/degree programs or into the workforce with industry recognized credentials to set them up for success.

I look forward to continuing to grow our CTE program throughout the district to give our students as many opportunities as they can for whatever they choose to pursue after araduation.

Sincerely,

Bryan Schuerman, M.A., M.Ed Pontiac School District CTE Administrator



# STARS SHINE BRIGHTEST In Pontiac

Pontiac School District Career Pathways & Dual Enrollment Pontiac School District is leading the charge in preparing our students for incredible careers after graduation!

Our Career Pathways programs provide students with real-world opportunities to gain experiences in some of the most sought out industries, working at Fortune 50

companies, and the keys for success in anything they do. We work directly with NAF, Education Foundations, Human Services, Emergency Services, Public Safety SME Prime, General Motors, St. Joseph Mercy Hospital, Oakland University, and many more world-class organizations to bring the best of the best to our students.

Additionally, college-bound students can get a further head start through our Dual Enrollment program. Our students graduatefrom the district prepared, ready, and experienced in their chosen field.

### **CURRENT PATHWAYS INCLUDE:**

- Aviation/Aerospace
- Business & Finance
- Education General
- Engineering Technology
- Health Sciences
- Information Technolgy
- JROTC
- Marketing
- Public Safety

Learn more about which pathway is right for your student at: http://www.pontiac.k12.mi.us or by scanning the QR code below.











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**Aviation**/Aerospace

According to Boeing's Piolet and Technician Outlook, the world will need over 600,000 new piolets and nearly 700,000 new technicians in the next 20 years. Schools and districts nationwite must prepare students for these high-paying, rewarding careers in aviation and aerospace. Pontiac High Schools Aviation/Aerospace Program will leverage curriculum in partnership with the AOPA Foundation High School Aviation STEM Curriculum unlocking pathways to aviation careers for thousands of teens whether it will be preparing students to become a professional or private pilot through the FAA's Pilot Certification Program, or work in the aviation maintenance industry, or even become a small business owner by becoming FAA drone certified and operating their own drone business and completing the FAA's Remote Pilot Knowledge Certification Exam.





Aircraft Owners and Pilots Association



# AVIATION & AEROSPACE

### LAUNCHING INTO AVIATION | 9th Grade

The ninth-grade course provides the foundation for advanced exploration in flying, aerospace engineering, and unmanned aircraft systems. Students will learn about engineering practices, problem-solving, and the innovations and technological developments that have made today's aviation and aerospace industries possible. Students will look at the problem-solving practices and innovative leaps that transformed space exploration from the unimaginable to the common in a single generation. Students will also gain a historical perspective, from the earliest flying machines to various modern aircraft.

### EXPLORING AVIATION AND AEROSPACE | 9th Grade

This core aerospace and aviation course provides the foundation for both pathways and gives students a clear understanding of career opportunities in aviation and aerospace and the critical issues affecting the industry. Students will also begin to drill down into the various sectors of aviation and the elements that make up the aerospace ecosystem. They will discover how advances in aviation created a need for regulation and learn about the promulgation of civil aviation oversight. Students will explore modern innovations and develop innovative ideas to address the aviation industry's real-world challenges. They will be exposed to various career options in aviation and aerospace and take an in-depth look at available opportunities.

### INTRODUCTION TO FLIGHT | 10th Grade

In the Introduction to Flight course, students pursuing the Pilot and UAS tracks will look closely at the aircraft they may one day operate. Students will begin with an exploration of the types of aircraft in use today before learning how aircraft are made and how they fly. Students will understand how aircraft are categorized, be able to identify their parts, and learn about aircraft construction techniques and materials. They will gain an in-depth understanding of the forces of flight—lift, weight, thrust, and drag—including how to make key calculations. They will then touch on aircraft design, looking at stability, aircraft controls, and maneuvering flight. The course will focus on career skills related to these topics.

### AIRCRAFT SYSTEMS AND PERFORMANCE | 10th Grade

In the Aircraft Systems and Performance course, students in the UAS and Pilot tracks will take an in-depth look at the systems that make crewed and uncrewed aircraft work. Beginning with aircraft powerplants and fuel systems, students will learn about the options available and how they affect aircraft design and performance. They will explore other key aircraft systems, including electrical, pitot-static, and vacuum systems. Throughout the course, they will learn about the flight instruments associated with each system and how to identify and troubleshoot common problems. This unit also covers aircraft flight manuals and required aircraft documents. Finally, students will learn about the factors that affect aircraft performance and how to determine critical operating data for aircraft.

## **PILOT TRACK**

### THE FLYING ENVIRONMENT - PILOT | 11th Grade

This course is foundational for both crewed and uncrewed aviation. It will prepare students to take either Federal Aviation Administration tests: the Private Pilot Knowledge Test or the Part 107 Remote Pilot Knowledge Test. Topics include preflight procedures, airspace, radio communications, aviation terminology, regulations, airport operations, aviation safety, weather, cockpit management, and emergency procedures.

### FLIGHT PLANNING | 11th Grade

The Flight Planning course will cover the remaining topics necessary for students to take the Federal Aviation Administration's Private Pilot Knowledge Test. Students will learn about pilot and aircraft qualifications, cross-country flight planning, weight and balance, performance and limitations, human factors, chart use, night operations, navigation systems, and aeronautical decision-making. Students will be provided the opportunity to participate in multiple practice examinations. At the end of this course, a school may choose to arrange for students to take the Federal Aviation Administration's Private Pilot written exam.



# AVIATION & AEROSPACE

### PREFLIGHT YOUR CAREER | 12th Grade

Students will examine advanced aviation topics and career options after preparing for the Private Pilot Knowledge Test or Part 107 Remote Pilot Test in the previous year. Instrument flight, commercial aviation, and advanced aircraft systems begin the semester. Looking into the future, students will then explore new horizons in the aerospace industry. What might aviation look like five, ten, or twenty years into the future? The focus then turns to business development opportunities in aviation. Finally, students will learn about and conduct different types of research in preparation for their capstone project in the second semester.

### THE CAPSTONE EXPERIENCE (PILOT) | 12th Grade

The capstone course is the culmination of the student learning experience. The students will work individually or in small groups to study and report on an aviation topic of their choosing. The goal of this capstone course is to allow students to demonstrate an understanding of a contemporary topic in aviation. The curriculum will include presentations and activities to help guide student research and project development.

## **DRONE TRACK**

### THE FLYING ENVIRONMENT - DRONE | 11th Grade

This course is foundational for both crewed and uncrewed aviation. It will prepare students to take either Federal Aviation Administration tests: the Private Pilot Knowledge Test or the Part 107 Remote Pilot Knowledge Test. Topics include preflight procedures, airspace, radio communications, aviation terminology, regulations, airport operations, aviation safety, weather, cockpit management, and emergency procedures.

### A WORLD OF UAS | 11th Grade

The UAS Operations course will cover many topics surrounding UAS missions, from mission planning to UAV performance to crew resource management. Students may take the Federal Aviation Administration's Part 107 Remote Pilot Knowledge Test upon completion of this course.

### UAS OPERATIONS | 12th Grade

After preparing for the Part 107 Remote Pilot Test the previous year, students can earn a valuable FAA certification and CTE stackable credential to work as commercial drone pilots. This year, they will use that certification—and the knowledge they acquired pursuing it—in real-world scenarios that illustrate how drones are used across various industries today. Students will also learn how drone operations can be used to build or enhance a business and the entrepreneurial skills necessary to get a start-up off the ground. They will also review drone rules within their communities, enabling them to make recommendations to elected officials on optimizing UAS operations in their communities. Finally, students will learn about and conduct different types of research in preparation for their capstone project in the second semester.

### THE CAPSTONE EXPERIENCE (DRONE) | 12th Grade

The capstone course is the culmination of the student learning experience. The students will work as individuals or in small groups to study and report on a UAS topic of their choosing. The goal of this capstone course is to allow students to demonstrate an understanding of a contemporary topic in the drone industry. The curriculum will include presentations and activities to help guide student research and project development.

# CTE Career & Technical Education



The Business & Finance Pathway connects high school students with the world of financial services, offering a curriculum that covers entrepreneurship, banking and credit, financial planning, international finance, securities, insurance, accounting, and economics, among other topics.

The Business & Finance curriculum is vetted by partners in the financial services and business sectors and emphasizes literacy and project-based learning to engage students. Students begin with Business Communication and Technology to gain a broad understanding of the core concepts needed in this field. Teachers also have access to NFTE's entrepreneurship curriculum and Virtual Enterprises International (VEI). Graduates benefit from learning the critical concepts of business management, accounting, and ethics. NAF students will have completed at least four NAF courses by graduation



### **CAREER HIGHLEIGHTS** Career Examples:

- Entrepreneur
- Owner
- Investor
- Accountant
- Banker

By 2029, 476,000 people are needed with these skills

NEW JOBS

BY 2029

IEDIAN ANNUAI

WAGE



# BUSINESS & FINANCE

### **Business Management & Admin Courses**

### CAREER SKILLS & TECHNOLOGY (HSBC110)

In this course, students will be introduced to careers and the use of technological resources as they apply to school, business, and industry. Students will develop basic skills in Microsoft Office. Integrated throughout the course are activities related to employability skills, communication/writing skills, and proof reading. Multiple opportunities to enhance their Educational Development Plan (EDP) will be provided. Other topics include internet research and exploring web-based resources. This course is part of the Business, Management, Marketing, and Technology Pathway.

### **PROFESSIONAL ETHICS (HSCTE 602)**

Professional Ethics provides a solid understanding of why ethics is essential in everyprofession. After an introduction to several philosophies that inform ethics today, learners explore the characteristics of an ethical professional. They consider the range of dilemmas managers and employees face in the workplace and discover the qualities of influential leaders and the tools modern professionals use to instill an ethical workplace culture. Throughout the course, learners have opportunities to refine their personal sense of ethics as they begin to build an ethical foundation for their professional future.

### **BUSINESS MANAGEMENT & TECHNOLOGY I (HSBC712)**

This is the second course, part of the BMMT pathway, and a continuation of CareerSkills and Technology. Students will be introduced to business and finance. Topics include economics, international business, financial management, credit, and insurance. Students will learn how to use financial information, charts and graphs, and basic databases for business purposes.

### **BUSINESS MANAGEMENT & TECHNOLOGY II (HSBC718)**

Students will continue their study of the business world and advance their skills in presentation, leadership, teamwork and strategy. Topics include entrepreneurship, human resources, production and business operations, business management and leadership, and business law. This is the third course and is part of the BMMT pathway.

### Finance & Finance Management Courses

### FINANCE EXPEDITION (HSBC600)

Finance Expeditions is a series of authentic project learning experiences that energizes learners to identify passion projects and inspires them to imagine innovative solutions to real-world issues in partnership with career experts. Learners engage in self-reflection, research, and investigation with finance competencies, and Future Ready Passports guide them through deep dives into cryptocurrencies and blockchain (with more topics to come).

### PRINCIPALS OF FINANCE (HSBC120)

Principles of Finance gives learners a thorough introduction to finance concepts, tools, and institutions and serves as a foundation for the core courses offered by the Business & Finance Pathway. Principles of Finance begins with the basics of financial literacy and the function of finance in society. Learners study income and wealth, including budgeting, personal banking, credit and borrowing, and planning for retirement.

### FINANCIAL ACCOUNTING (HSBC700)

Principles of Accounting provides learners with an understanding of the critical accounting process and facilitates decision-making by providing data and information to internal and external stakeholders. Learners find out that accounting is an integral part of all busines activities. It plays an essential role in the everyday accountability of a business and high-stakes decision-making and analysis. In addition, learners discover how to apply technology to accounting by creating formulas and inputting data into spreadsheets.

### MANAGERIAL ACCOUNTING (HSBC701)

Principles of Accounting provides learners with an understanding of the critical accounting process and facilitates decision-making by providing data and information to internal and external stakeholders. Learners find out that accounting is an integral part of all business activities. It plays an essential role in the everyday accountability of a business and high-stakes decision-making and analysis. In addition, learners discover how to apply technologyto accounting by creating formulas and inputting data into spreadsheets.





The Education Foundations & Human Services Courses are a new part of the CTE program at Pontiac High School under the Education General CIP code 13.0000.

There are three levels to this program. Each course covers competencies that, if a student completes all competencies over the 3 courses, can then apply for a CDA (Child Development Associates) or a MiYda (Michigan Youth Development Associates) certificate. The CDA certification is for students interested in working with youth ages birth to 5 years old in an Early Childhood career setting. The MiYDA certificate is for students interested in working with youth ages 5 and up (school-age children) in education or youth group settings.



Every year there will be 109k new elementary school teacher jobs to fill!



# EDUCATION GENERAL

### CHILD DEVELOPMENT I & II (Grades 10 & 11)

In this course students will study factors of Child Development relating to the major areas, including; Physical, Intellectual, Emotional, Social, and Moral development, fetal development, conception/pregnancy, and infant health and safety. The major assessment of this course is the Real Care Infant Simulator experience, where for one weekend, the student will take home a simulation infant and provide around-the-clock care. Students will also explore careers and have multiple opportunities to connect their educational decisions to career options. Career awareness, exploration, preparation, and training may include field trips, guest speakers, job shadows, and job placements as part of this course. Competencies mastered in this course include Health, Safety, and Wellness and Cultural Competency. The course would start the CDA or MiYDA certification process but is not mandatory to earn these certifications. A student may still enroll in this course to satisfy their ½ Credit of Applied Arts.

### EXPLORING CAREERS IN EDUCATION & HUMAN SERVICES (DUAL ENROLLMENT COURSE) Grades 10 & 11

This course was designed to assist students with exploring careers and developing the skills necessary to make meaningful decisions about their career choice in Education and Human Services. Students will be made aware that there are many factors to consider before selecting a suitable career. This course will assist the students in assessing their personal strengths and weaknesses as they relate to career decisions. This course will aid the student in developing strategies to make an effective transition from school to work. The student will develop skills in this course that are generic to all occupations, such as properly preparing career documents needed to obtain employment. The student will be able to recognize that career enhancements and career changes are common and that they need to be prepared with the proper tools, resources, and guidance to make informed decisions about their career choice throughout their lifetime. The course would continue and add to the CDA or MiYDA certification process, but is not mandatory to earn these certifications. A student may still enroll in this course to satisfy their ½ Credit of Applied Arts.

### EDUCATION FOUNDATIONS 1A & 1B (DUAL ENROLLMENT COURSE)

### Grade 11 & 12 (YEAR LONG | Two Class Periods)

The Education Foundations I (Teacher Cadet Class) is an innovative, year long teacher training course designed for the student who is curious about going into the field of education. This course seeks to provide the student with an insight into many facts of education, including a work-based learning teaching opportunity. The main focus will be teaching, but the course does expand to all aspects of the field of education. Students will do a fieldwork placement in an elementary or middle school classroom in the district. Competencies mastered include ethics & and professional growth, instructional strategies, lesson planning, classroom management, assessment, Work Based Learning/Clinical Placement, Career Readiness Practice, strategic partnerships, program development, and special populations and diverse learners. This course is mandatory to complete the process for the CDA or MiYDA certifications. However, it is not mandatory for a student to complete the certification. Students may still enroll in this course as part of their high school graduation credits and is part of the CTE world language and applied arts credits if needed.

### EDUCATION FOUNDATIONS 2A & 2B (DUAL ENROLLMENT COURSE)

### Grade 12 (YEAR LONG | Two Class Periods)

This second-year course will expand my knowledge of the teaching field through advanced lesson planning, job shadow observations, and advanced field placement experiences. The student will focus their learning on early childhood or primary/secondary education. This course is mandatory to complete the process for the CDA or MiYDA certifications. However, it is not mandatory for a student to complete the certification. Students may still enroll in this course as part of their high school graduation credits and is part of the CTE world language and applied arts credits if needed.

### ADDITIONAL OPTIONAL COURSES AVAILABLE





The goal of the Pontiac High School Engineering Technology Pathway is to provide students with the skills and knowledge they need to compete in future manufacturing fields.

In Pontiac High School's Engineering Technology Pathway, we engage students by using Engineering Technology as a lens to analyze, approach, and solve everyday problems. Students learn how to think as professionals, and demonstrate high levels of engagement and the joy of learning.

The Pontiac High School Engineering Technology is open to all students beginning in the 9th grade. It is a four-year program that includes a curriculum designed to prepare students for jobs in the Engineering Technology field directly out of high school.

Upon graduation, students will have earned certifications and worked internships with local businesses to prepare them for immediate employment upon graduation.



### **CAREER HIGHLIGHTS** Career Examples:

• CAD/CAM

• Industrial Maintenance

By 2029, 74,000 new jobs will have been created in this area.

**MEDIAN ANNUAL** 

WAGE



### ADDITIVE MANUFACTURING TRACK

This program teaches students the fundamentals of additive manufacturing careers within the manufacturing industry. Students will apply core product design and design skills within 3D printing technologies. Emphasis will be placed on the design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. At a minimum, the Additive Manufacturing pathway aligns with the CTE Manufacturing Career Cluster Manufacturing Production Process Development Pathway, Michigan Academic Standards, and the Departments of Education's Classification of Instructional Programs (CIP).

### INTRO TO ADDITIVE MANUFACTURING (HSCTE793)

Review of additive-manufacturing principles and applications across industries, including automotive, aerospace, medical devices, and electronics, emphasizing characteristics and performance of common materials (polymers, metals, ceramics, and composites) used for different applications. Students are introduced to the design process for additive manufacturing and become familiar with the advantages and limitations of each additive manufacturing technology in terms of precision, resolution, material capabilities, speed of production and related cost.

### PRINT READING AND MEASUREMENT (HSCTE794)

The Introduction to Artificial Intelligence (AI) course teaches students important programming concepts that enable the use of AI in computer science and society at large. Students learn the implications of AI on society and develop a series of projects that illustrate the ariety of ways AI can be used to optimize and predict information.

### **CAD/CAM DESIGN**

This course allows students to draw and create geometry using selectCAD/CAM software packages. Schools may have preferred software used for their program. To meet this requirement, the lessons are written to support instruction using a number of CAD/CAM software packages. This course is designed for non-complex objects like lines, circles, arcs, points, polygons, fillets, chamfers, and irregular curves.

### GEOMETRIC DIMENSION AND TOLERANCING(HSCTE281)

The instructor will provide a basic introduction to the symbols and vocabulary of geometric dimensioning and tolerancing, or GD&T. The instructor will explain how GD&T uses tolerance zones that more accurately follow the shape of a feature rather than a square grid blueprints usually utilize and how it emphasizes the relationship between features to describe parts. The instructor should use examples of GD&T prints to review symbols and controls. These prints should be matched with finished parts and measured using inspection tools.

The instructor will allow students to fully dimension a working drawing using ANSI standards and add specific notes to the drawing for manufacturing features. The instructor will teach proper dimensioning and annotation using the CAD/CAM system, allowing students to apply these skills in a practical project. The instructor should give students specifications to draw and fully annotate for production. The instructor will evaluate the practical projects, and the class will discuss best practices as a group.

### **DESIGN FOR ADDITIVE MANUFACTURING (HSCTE298)**

The instructor will provide a timeline of manufacturing over time, from its earliest days to exciting new technologies of today's manufacturing environment. In addition, the instructor will discuss career options and pathways available in manufacturing using entertaining but instructional videos. The purpose is to provide awareness surrounding the exciting technologies in manufacturing and to deliver the message that there are many long-term, well-paid careers in the industry. It is encouraged to use as many entertaining, engaging videos as possible to "edutain" the students and to get them excited about working in the industry.

### ENGINEERING RESPONSIBILITY & CAPSTONE PROJECT A & B (HSCTE286 & HSCTE288)

This represents the capstone project a student will work on that encompasses all knowledge and skills attained during the program. Instructors may choose to tie this work to external credentials, build community projects, or have CAD/CAM students work in cooperation with other pathway programs to design and manufacture projects. Instructors may want to have industry partners collaborate, judge, and/or evaluate student projects. The intent of this capstone project is to provide students with a portfolio piece that would impact hiring decisions by employers. This course will prepare students for entering the workplace. Working in manufacturing requires employees to possess certain foundational skills. These include a strong academic grounding in reading and math and individual abilities such as teamwork, problem solving, work ethic, and integrity. This course will provide students with the abilities that will help them get and keep a job.





### CAD/CAM TRACK

The CAD/CAM Pathway program teaches students the fundamentals of drafting standards. Students will learn basic entry level drafting standards and skills required for that field. Students will gain experience using the software while designing real-world working models. Sketching, 2D/3D drawing, geometric tolerancing and dimensioning, multi-view drawing layout, and much more are taught on the computer. Students will also be introduced to common manufacturing processes and machine tools used within those processes, including the capabilities and limitations of each.

### **INTRODUCTIION TO CAD/CAM (HSCTE791)**

This course introduces students to CAD and CAM systems and how they are used in manufacturing. This class will introduce important terminology and review the history of CAD's evolution in manufacturing. Finally, the course will discuss career opportunities found in the CAD/CAM field. The instructor may coordinate with local companies to schedule a CAD/CAM personnel to visit the class and talk about their day-to-day responsibilities and career development.

### PRINT READING AND MEASUREMENT (HSCTE794)

The Introduction to Artificial Intelligence (AI) course teaches students important programming concepts that enable the use of AI in computer science and society at large. Students learn the implications of AI on society and develop a series of projects that illustrate the variety of ways AI can be used to optimize and predict information.

#### INTRODUCTION TO MACHINE TOOLS (HSCTE282) GRADE 10 | PREREQ: BASIC COMPUTERS

### As a CAD/CAM designer, one of the pathways for this career is to design parts formetal cutting processes. This course introduces

students to metal cutting machines and general processes that turn, bore, thread, form, face, mill, plane, shape, groove, or profile metal materials to meet the required specifications. This course will cover theory and variables in metal cutting, and live equipment will be used to show the application of theory to sample parts.

### **OPERATING A CAD/CAM SYSTEM (HSCTE285)**

This course introduces the basic navigation and orientation for select CAD/CAM software products. Schools may have preferred software used for their program. To meet this requirement, the lessons are written to support instruction using a number CAD/CAM software packages.

### CAD/CAM APPLICATIONS & MODELING (HSCTE292)

This course provides students with a working knowledge of how to created ocumentation needed in the workplace in accordance with standards and codes. Students will create technical drawings and present hard copy versions of the materials for instructor and peer review.

### GD& T & CAD/CAM DESIGN (HSCTE292)

The instructor will provide a basic introduction to the symbols and vocabulary of geometric dimensioning and tolerancing, or GD&T. The instructor will explain how GD&T uses tolerance zones that more accurately follow the shape of a feature rather than a square grid blueprints usually utilize and how it emphasizes the relationship between features to describe parts. The instructor should use examples of GD&T prints to review symbols and controls. These prints should be matched with finished parts and measured using inspection tools.

The instructor will allow students to fully dimension a working drawing using ANSI standards and add specific notes to the drawing for manufacturing features. The instructor will teach proper dimensioning and annotation using the CAD/CAM system, allowing students to apply these skills in a practical project. Students should be given specifications by the instructor to drawand fully annotate for production. The instructor will evaluate the practical projects, and the class will discuss best practices as a group.



### EMPLOYABILITY CAD/CAM CAPSTONE A & B (HSCTE891 & HSCTE893)

This represents the capstone project a student will work on that encompasses all knowledge and skills attained during the program. Instructors may choose to tie this work to external credentials, build community projects, or have CAD/CAM students work in cooperation with other pathway programs to design and manufacture projects. Instructors may want to have industry partners collaborate, judge, and/or evaluate student projects. The intent of this capstone project is to provide students with a portfolio piece that would impact hiring decisions by employers. This course will prepare students for entering the workplace. Working in manufacturing requires employees to possess certain foundational skills. These include a strong academic grounding in reading and math and individual abilities such as teamwork, problem solving, work ethic, and integrity. This course will provide students with the abilities that will help them get and keep a job.

## **INDUSTRIAL MANUFACTURING TRACK**

### INTRODUCTION TO INDUSTRIAL MANUFACTURING (HSCTE792)

This course introduces students to CAD and CAM systems and how they are used in manufacturing. This class will introduce important terminology and review the history of CAD's evolution in manufacturing. Finally, the course will discuss career opportunities found in the CAD/CAM field. The instructor may coordinate with local companies to schedule a CAD/CAM personnel to visit the class and talk about their day-to-day responsibilities and career development.

### PRINT READING AND MEASUREMENT (HSCTE794)

The Introduction to Artificial Intelligence (AI) course teaches students important programming concepts that enable the use of AI in computer science and society at large. Students learn the implications of AI on society and develop a series of projects that illustrate the variety of ways AI can be used to optimize and predict information.

### **MACHINE TECHNOLOGIES (HSCTE283)**

This course covers the fundamental principles, operational practices, installation procedures, and maintenance scheduling of mechanical power transmission systems used in industry. Topics included in this course include materials & fasteners, lubrication, power transmission, pumps/valves/piping, compressors, conveyors systems, motors and fans/blowers. Emphasis on this course will involve conveyors and AC and DC motors and motor controls. Students will be provided hands-on opportunities for repair and installation of machine components.

### **MECHANICAL THEORY & BEARING SEALS (HSCTE 284)**

This course will provide students with a foundational overview of mechanical systems and the principles of applied mechanics and thermodynamics, as it pertains to the trade. After the class, students will understand the basic principles of applied mechanics, such as: mechanical advantage; work; power; force; torque; efficiency; levers; moments; friction; and potential and kinetic energy. Throughout this course, student will learn to identify and describe the make-up of each type of liner material and describe the reasons for using the following bearing materials, such as: bronze; cast iron; ryertex; teflon; Babbitt; aluminum; plastics and wood.

### FLUID POWER AND ELECTRICAL CONTROLS (HSCTE 283)

This course covers the fundamental principles, operational practices, installation procedures, and maintenance scheduling of fluid power systems, including hydraulic and pneumatic systems. Students will become familiar with common components found within each fluid power system. Students will be provided hands-on opportunities for repair and installation of machine components. This course will introduce students to basic knowledge of electrical and electronic theory. Students will learn the purpose and scope of electrical codes and safety precautions and understand electric shock. The course will help students describe electric and electron principles and differentiate between AC and DC. Students will apply OHM's law in real world scenarios.



### MACHINE WELDING AND FABRICATION (HSCTE315)

This course will introduce students to common fabrication tools used during maintenance work. Students will be given the knowledge of the principles of metal cutting and the relationship between speeds and feeds during the various machining operations. Students will apply specific trade calculations and formulas to machine parts towards engineering specifications. Machine tools include the setting up and safe operation of sawing, turning, milling, drilling and grinding equipment. This course will also provide students with skills in welding and fabrication practices, techniques and pertinent regulations.

### APPROACHES TO MAINTENANCE & MACHINE A&B (HSCTE303 & HSCTE305)

This course will prepare students for entering the workplace. Working in manufacturing requires employees to possess certain foundational skills. These include a strong academic grounding in reading and math, but also individual abilities such as teamwork, problem solving, work ethic, and integrity. This course will provide students with the abilities that will help them get and keep a job. This course will introduce students to common manufacturing maintenance strategies, including reactive, corrective, predictive, preventive, reliability-centered, and total productive maintenance. The course describes the advantages and disadvantages of each method, the benefits of planned downtime, and the importance of a customized maintenance approach. Students learn strong troubleshooting and problem-solving techniques through scenario-driven exercises. Students will have the opportunity to use predictive maintenance tools commonly found in the workplace.



Students who have completed this program have been accepted to collegiate nursing programs and accepted positions at McLaren Hospital, St. Joseph Mercy Oakland, and other medical facilities.

The Pontiac School District has partnered with Covenant Academy to provide students with a unique learning opportunity. The Certified Nursing Assistant (CNA) program provides students with the entry-level knowledge and clinical skills necessary to enter the healthcare field as a Certified Nursing Assistant in hospitals, sub-acute, and rehabilitation care settings. As vital healthcare team members, CNAs provide direct patient care such as, but not limited to, taking vital signs, specimen collection, and comfort measures. This program provides excellent preparation for entry into any nursing program.



• Patient Care Technician

By 2030, 193,800 people will be needed to fill these positions



# HEALTH SCIENCES

### CNA FIELD A (HSCTE150) | Summer Year 1

This course will introduce the theory and techniques involved with the role of the NurseAide. As a nurse aide, one will perform the tasks given to them by the nurse. Upon completion of the training program, the student will be able to perform the following practical patient care procedures with supervision in the following areas:

- VITAL SIGN MEASUREMENT
- ROM EXERCISES
- ADMIT, TRANSFER, AND PATIENT DISCHARGE
- APPLICATION OF HOT AND COLD TREATMENTS
- SPECIMEN COLLECTION
- CARE OF THE DYING PERSON
- POST-SURGERY PATIENTS
- CARE OF THE PATIENT WITH CHRONIC ILLNESSES
- SAFETY WITH TRANSFERRING AND AMBULATION

### PCT MATH A (HSCTE816)

Students learn the fundamental components of direct patient care and the application of techniques and procedures to provide care to patients. Topics include an introduction to patient care skills, basic therapeutic techniques, data collection and communication skills, legal and ethical aspects that affect the practice of patient care technicians, safety measures, and vital signs. Hands-on demonstration, practice, and validation of skills are conducted in the nursing skills laboratory.

### PCT MATH B (HSCTE819)

Students build on their patient care knowledge and skills in such areas as patient vital signs, support of the nursing care plan, fundamentals of basic nutrition, and care specific to different body systems. Hands-on demonstration, practice, and validation of skills are conducted in the nursing skills laboratory.

### PCT GENERAL ELECTIVE A & B (HSCTE821)

Students apply the knowledge and skills learned in Patient Care Technician I/II to the acute care environment with the supervision of a Michigan Licensed Registered Nurse.

### PCT ANATOMY & PHYSIOLOGY A (HSCTE817)

This course provides the students, primarily in health-related programs, an in-depth understanding of the human body's anatomy, physiology, and medical terminology. Biological principles and the structural and functional relationships among several organsy stems are discussed.

### PCT ANATOMY & PHYSIOLOGY A (HSCTE820)

This course is a continuation of Anatomy and Physiology I. This course provides students with an in-depth understanding of the structure, function and medical terminology of theremaining organ systems. Interrelationships among organ systems are emphasized.

RVIEN

### HEALTH SCIENCES INTERNSHIP A & B

This course is sustained and provides progressively intensive interactions with employers or community professionals in real workplace settings, to the extent practicable, or simulated environments at an educational institution that fosters in-depth, first-hand engagement with the tasks required of a given career field that is aligned to curriculum, instruction, and Career and Technical Education (CTE) Program standards.





The Pontiac High School Information Technology Pathway aims to provide students with the skills and knowledge they need to be competitive in future technological fields.

At Pontiac High School, we engage students by using Information Technology as a lens to analyze, approach, and solve everyday problems. Students learn how to think as professionals, demonstrate high levels of engagement, and enjoy learning.

The Pontiac High School Information Technology pathway is open to all students beginning in the 9th grade. It is a four-year program that will include a curriculum designed to prepare students for jobs in the IT field directly out of high school.

Upon graduation, students will have earned certifications and worked internships with local businesses to prepare them for immediate employment upon graduation.



# Career Examples:

- Computer Programming Coder
- Gamer
- Digital Video Production
- Graphic Design
- Web Design



By 2029, 531,000 new jobs will have been created



## INFORMATION TECHNOLOGY Curriculm

### PRINCIPALS OF IT COMPUTER SYSTEMS | Grade 9

Computer Systems is a foundational course that guides learners through the intricacies of setting up hardware, installing software, connecting to a network and the Internet, and troubleshooting. The course covers servicing, upgrading, and maintaining processing components for memory, storage, input, and output. It also addresses protecting, maintaining, and upgrading software and provides troubleshooting techniques. Finally, learners research the current computer systems careers.

### INTRO TO COMPUTER SCIENCE PROGRAMMING | Grade 10

Introduction to Programming uses the Python programming language to introduce learners to basic programming skills, and they discover the principles of programming by comparing Python to other programming languages. The course begins with algorithms and lays a foundation for mastering variables, operators, and control structures. Learners use models to solve new problems using knowledge and techniques already learned quickly; after gaining this foundation, learners design programs and write functions. In addition, students learn program design, documentation, formal debugging, and testing.

### INTRO TO PROGRAMMING COMPUTER NETWORK | Grade 10

Computer Networking provides a hands-on introduction to working with peer-to-peer, client/server, and cloud networks. The course begins with a brief history of networks. It then guides learners through all phases of implementing and troubleshooting standard TCP/IP Ethernet networks using network hardware connected with CAT5/6 cable. It covers network components, cables, and connectors. Learners go through the OSI model, protocols, and topologies and the process of implementing and troubleshooting a LAN and discussing access issues for WANs. Learners get hands-on practice with cloud computing and find out how cloud computing is different from working on a local server network. Finally, they get a chance to discover what types of network-related careers exist today.

### **COMPUTER SCIENCE APPLICATION | Grade 10**

CSA focuses on integrating technologies across multiple platforms and networks, including the Internet. Students collaborate to produce programs that integratemobile devices and leverage those devices for distributed collection and data processing. Students analyze, adapt, and improve each other's programs while working primarily in Java and other industry-standard tools. This course prepares students for the College Board's Advanced Placement CS-A test and aligns with CSTA Level 3C Standards.

### DATABASE DESIGN | Grade 11

This course introduces students to the profound changes taking place worldwide in the tourism industry. Students examine the environmental and socioeconomic impacts and interrelationships of tourism and the transition to a greener tourism economy. They explore the ramifications of tourism development in terms of increased sustainability, profitability, and benefits to the surrounding communities, and they examine ecotourism as a model for sustainability.

### **GRAPHIC DESIGN | Grade 11**

Graphic Design presents a hands-on introduction to a professional designer's technical andcreative skills. First, learners find out the distinguishing features of communicating visually through graphic design. Next, they gain technical skills in Adobe Photoshop to equip them for graphic design work. From there, learners master the basic principles of graphic designand then delve into graphic design elements such as color, typography, and images.

# **INFORMATION TECHNOLOGY ELECTIVES**

### COMPUTER SCIENCE PRINCIPALS | Grades 9-12

Designed for 9 - 12 grade students, CS Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. This year-long course can betaught as an introductory course and as an AP course - no prerequisites required for students or teachers new to computer science! CS Principles complements CS Discoveries with a deeper focus on concepts such as how the internet works and the societal impacts of computer science.



## INFORMATION TECHNOLOGY CURRICULM

### DIGITAL ELECTRONICS | Grade 11

Digital Video Production provides a hands-on introduction to digital video. It guides learners through all phases of digital video production, including pre-production and planning, executing and managing a video shoot, and editing and post-production techniques. Learners explore methods of sharing and broadcasting digital videos, including multiple-platform versions, external devices, and web delivery. They also learn about the latest methods for publicizing a digital video, such as using online search engines to direct viewers to the production. Finally, learners have a chance to discover the types of careers that exist in digital media today.

### AP COMPUTER SCIENCE A | Grade 11 (NAF | PREREQUISITE: COMPUTER SCIENCE PRINCIPALS)

Computer Science A (CSA) introduces students to software engineering and object-oriented design while learning the Java programming language. The Code.org CSA curriculum is recommended for any high school student who wants to continue their computer science education after completing an introductory course, such as CS Principles or CS Discoveries. Students expand their programming skills by developing solutions in the Java programming language, building on the knowledge they acquired from their previous introductory course.

### CYBER SECURITY | Grade 12

Cybersecurity is a comprehensive year-long course geared towards educators teaching high school cybersecurity. With over a hundred and fifty lesson topics and many activities, the Cybersecurity course provides the rigor and relevance expected for top quality cyber security education. Not only does Cyber Security introduce real-world Cyber Security concepts and skills, but it also prepares students to verify their technical know-how through the CompTIA Security + Certification.

### WEB DESIGN | Grade 12

Web Design provides a hands-on introduction to designing, building, and launching websites. First, learners discover how the World Wide Web works, and they examine successful websites. Then, they learn HTML coding basics and create their web pages. Next, learners explore various web development tools and practice creating websites. They learn how to make their websites more effective by applying the principles of design and usability, and accessibility criteria. In the final unit, learners explore various web design careers that they might want to pursue.

### DIGITAL VIDEO PRODUCTION | Grade 12

Digital Video Production provides a hands-on introduction to digital video. It guides learners through all phases of digital video production, including pre-production and planning, executing and managing a video shoot, and editing and post-production techniques. Learners explore methods of sharing and broadcasting digital videos, including multiple-platform versions, external devices, and web delivery. They also learn about the latest methods for publicizing a digital video, such as using online search engines to direct viewers to the production. Finally, learners have a chance to discover the types of careers that exist in digital media today.

### ARTIFICIAL INTELLIGENCE | Grade 12

The Introduction to Artificial Intelligence (AI) course teaches students important programming concepts that enable the use of AI in computer science and society at large. Students learn the implications of AI on society and develop a series of projects that illustrate the variety of ways AI can be used to optimize and predict information.

### WORK BASED LEARNING | Grades 11-12

Work-Based Learning is sustained and progressively intensive interactions with employers or community professionals in real workplace settings, to the extent practicable, or simulated environments at an educational institution that fosters in-depth, first-hand engagement with the tasks required of a given career field that are aligned to curriculum, instruction, and Career and Technical Education (CTE) Program standards.

# **CTE** Career & Technical Education



The purpose of Army JROTC is to prepare high school students for responsible leadership roles while making them aware of the benefits of citizenship. JROTC teaches leadership success skills, physical fitness, health, and citizenship.

Retired Army officers and noncommissioned officers teach JROTC classes experienced in working with young people. If students have an interest in the military, this program will prepare them for the U.S. Army by covering topics such as U.S. Military History, first aid, human relations, good techniques for communicating, drill and ceremony, military map reading, etc.

Students are not obligated to join the service. In addition, course materials, uniforms, supplies, and equipment are issued to the students free of charge.



I am an Army Junior ROTC Cadet

I will always conduct myself to bring credit to my family, country, school and the Corps of Cadet

I am loyal and patriotic

I am the future of the United States of America I do not lie, cheat or steal and will always be accountable for my actions and deeds

I will always practice good citizenship and patriotism

> I will work hard to improve my mind and strengthen my body

I will seek the mantle of leadership and stand prepared to uphold the Constitution and the American way of life

> May God grant me the strength to always live by this creed.



# J.R.O.T.C. Curriculm

### LEADERSHIP EDUCATION TRAINING

The JROTC program prepares Cadets for leadership roles, giving practical lessons that help them developinto active and engaged learners and leaders. The program promotes academic achievement and leadership development, providing Cadets with skills that they will use for the rest of their lives. The Academy's JROTC program at Army and Navy Academy consists of four levels of Leadership Education Training (LET) instruction. The JROTC curriculum is based on the principles of performance-based, learner-centered education and is linked to the McREL (instructional leadership resource) national standards. Every lesson and assessment actively engages students' higher-order thinking and skill performance. All Levels of LET are also required to do a "Service Learning Project."

# YEAR 1

The mission of Leadership Education and Training (LET) is to motivate young people to be better citizens. To accomplish this purpose, the text discusses citizenship, leadership, and a number of other courses designed to help cadets succeed in high school and after graduation. Cadets wear uniforms every day. The LET 1 Level consist of Foundations of Army JROTC, Being A Leader, Leadership Skills, Know Yourself-Socrates, Learning to Learn, Study Skills, Communication Skills, and Conflict Resolution. Extracurricular activities include ColorGuard, Drill team, and Rifle team competition and participation in local community events.

# YEAR 2

The second year of Leadership Education and Training is split into units including:Techniques of Communication, Leadership, Cadet Challenge, Leadership Lab, First Aid, MapReading, History, Your American Citizenship, Career Opportunities, and Role of the U.S.Army. The wearing of the uniform and extracurricular activities are the same as for LET I.



The third year of Leadership Education and Training provides additional leadership situations. In this year students will not only be more involved as teachers and leaders within the cadet battalion, but they will also do more independent studies in the areas of communication, leader, first aid, history, map reading, career opportunities, and technology awareness. The wearing of the uniform and the extracurricular activities are the same as forLET I.



The fourth-year Cadets are responsible for the daily Cadet administration and perform as commanders and staff officers. They act as assistant instructors in some subject areas for other JROTC classes. They continue to develop their leadership skills and plan special unit events such as the military ball and the annual awards banquet as well as several Leadership camps.



# **CTE** Career & Technical Education



The CTE marketing program prepares students for various careers in the field of marketing. Students will learn how products are developed, branded, and sold. They will analyze industry trends and gain hands-on experience in the marketing of goods, services, and ideas. They will also develop skills in professionalism, product planning, promotion, pricing, selling, economic issues, and changes in the marketplace.

Businesses in nearly every industry benefit from workers with a strong understanding of marketing, design, and strategy. As technology changes and improves, this will create new products and opportunities to attract customers. Companies rely heavily on sales and marketing professionals to build interest in their product. Workers skilled in data analysis and graphic design are especially in demand.



### **CAREER HIGHLIGHTS** Career Examples:

- Chief Marketing Officer
- Marketing Manager
- Public Relations Manager
- Advertising Sales
- Meeting/Convention/Event Planners

By 2029, 146,000 people are needed with these skills

Median Annual

WAGE

New Jobs

BY 2029



# MARKETING

### MARKETING 1A & 1B (HSBC300 & HSBC301 )

This course will introduce students to the functions and foundations of marketing. This is a hands-on project-based course that encourages independent thinkers as well as student collaboration. Presentation skills, creativity, soft skills, and mock interviews are part of this course to help prepare students for college and career. Topics that are covered are: Marketing, Selling, Economics, Communication Skills, Promotion and Career Portfolios. Marketing helps prepare students for college level course work as well as immediate entry into the world of work. Students enrolled in the Marketing program will be able to participate in DECA, Association of Marketing students. DECA gives students the opportunity to compete in marketing areas while building self-confidence and networking with business professionals. Participation in student organizations is an instant resume enhancement as well as an incentive on college applications.

### SMALL BUSINESS MANAGEMENT & ENTREPRENEURSHIP (HSBC210 & HSBC211)

#### Prerequisite: CTE Introduction to Marketing

This program presents small business operations and specialty marketing as a career path. Students will focus on the following areas: Business Operations, Product Service Management, Financial Start-Up, Human Resources, Fashion Marketing, Sports Marketing, Hospitality Marketing, and Travel/Tourism. Marketing students will learn how to run a small business and what it takes to become a successful entrepreneur. They will create a business plan; understand the communication skills necessary to operate a business while working in conjunction with specialty marketing topics.

Students will have the opportunity to join and compete in a DECA. Students will have the opportunity to take School Store Operations for a hands-on school-based enterprise experience.

-OR-

### MARKETING 2A & 2B (HSBC302 & HSBC303)

#### Prerequisite: Introduction to Marketing

This course is an upper-level marketing course that will prepare students for the collegiate level. This is a hands-on project-based course that will further the foundational concepts covered in Marketing I as well as introduce advanced topics of study. Topics that are covered are: Product Service Management, Marketing Research, Promotion/Advertising, Pricing, Human Resources and Professional Career Skills. Students will explore different career opportunities and college programs available in the business field by guest speakers. DECA is strongly encouraged.

**CTE** Career & Technical Education



The Emergency Services/Public Safety Pathway courses are part of the CTE Program at Pontiac High School and will help prepare students to become part of the emergency services/public safety industry under the CIP code 43.0100.

Public Safety/Protective Services program. There are 6 individual courses students will complete in cooperation with Oakland Community College, which when completed, students will be ready to take the Firefighter I and II state licensure exam, of which Oakland Community College has an 88% pass rate. After passing the exam, students can then choose to begin an EMT program or directly seek employment as some agencies may sponsor EMT/Medic Training. This is a great opportunity to enter into a rewarding career shortly after high school graduation without incurring any debt along the way.



### **CAREER HIGHLIGHTS**

### **Career Examples:**

Firefighter
Emergency Medical Technician (EMT) MEDIAN ANNUAL WAGE \$52K 40K

FIRE

FIGHTER



## PUBLIC SAFETY CURRICULM

# YEAR 1

### **OCC RESCUE & EXTRACTION (DUAL ENROLLMENT)**

### EMS 1200 | 1 OCC CREDIT

The course emphasizes the methods of gaining entry, freeing, and removing an injured and trapped individual from a vehicle without causing further harm. The class is taught by state certified instructors utilizing multiple methods of instruction. The second day is scheduled at an appropriate outdoor site and includes actual hands-on experience with light and medium extrication tools. This course is intended to be taken as part of the Basic EMT Program.

### **OCC FIREFIGHTER HEALTH & SAFETY (DUAL ENROLLMENT)**

### FFA 2530 | 4 OCC CREDIT

This course will provide an understanding, explanation, and the application of health and safety principles for self and for the community. Basic first aid, CPR, and care for medical emergencies will be emphasized as well as personal health and wellness for the firefighter. Practical application of these principles will be explored.

### OCC FIRE APPARATUS & TRAINING (DUAL ENROLLMENT)

### FFA 2510 | 5 OCC CREDIT

This course provides an understanding, explanation, and application of the role of the fire apparatuses and demonstrates appropriate usage during different scenarios. This includes but is not limited to use of portable fire extinguishers, ropes, knots, ladders, ventilation equipment, fire hose, appliances, and nozzles. Studentswill be assessed on the skills relevant to the course.

### OCC FIRE BEHAVIOR, DETECTION & SUPPRESSION (DUAL ENROLLMENT)

### FFA 2540 | 5 OCC CREDIT

This course will provide an understanding and explanation of fire behavior and the application of detection and suppression strategies for different scenarios. This includes but is not limited to use of forcible entry, search and rescue, water supply systems, salvage and overhaul, and smoke control. Students will be assessed on the skills relevant to the course.

### OCC FIRE SCENE, COMMUNICATION & COMMAND (DUAL ENROLLMENT)

### FFA 2520 | 4 OCC CREDIT

This course will explore the dynamics of fire service communications and how to estimate potential harm. Students will be required to plan and implement responses to different scenarios. Students will be assessed on the skills relevant to the course.

### **OCC HAZARADOUS MATERIALS, WILDLAND & SPECIAL RESCUE (DUAL ENROLLMENT)** FFA 2550 | 5 OCC CREDIT

This course will provide an understanding and explanation of fire behavior and apply the detection and suppression strategies in wildland and hazardous materials scenarios. Focus on assisting in special teams rescue, hazardous materials, and health and safety of the fire fighter when responding to hazardous material scenes. Students will be assessed on the relevant skills for this course.

# YEAR 2

### FIRE SAFETY/EMERGENCY SERVICES INTERSHIP A & B





NAF is a national non-profit organization that transforms the high school experience to prepare students for college, career, and future success.

NAF's design is uniquely comprehensive in its approach to skill development, enabling students of all backgrounds to participate in a meaningful education and gives businesses the opportunity to partner with schools to shape America's future workforce through career relevant curricula and work-based learning experiences, including internships.

Since 1980, NAF has been collaborating with communities to improve outcomes for students, especially where institutional and social barriers are the most prevalent, by implementing NAF academies – small learning communities within existing high schools.

NAF has grown from one NAF Academy of Finance in New York City to hundreds of academies across the country focusing on growing industries, including finance, hospitality & tourism, information technology, engineering, and health sciences; and support programs of study that are aligned with the National Career Clusters Framework.

During the 2022-23 school year, over 112,000 students attended 604 NAF academies across 35 states and territories. In 2022, NAF academies reported 99% of seniors graduated, with 88% of graduates planning to go to college.





Michigan's Career and Technical Education (CTE) programs provide students the necessary academic, technical and work skills to help them succeed in college and careers.

State-approved programs are grouped into 17 career clusters, that provide rigorous content aligned with challenging academic standards, as well as related relevant technical knowledge and skills. The blend of work-based learning experiences through partnerships with business and industry, and the development of soft skills through student leadership opportunities, provides a seamless transition into high ereducation and the world of work. The entire program supports the pillars of the Michigan Department of Education's Top 10 in10 initiatives.







National Technical Honor Society (NTHS) is the honor society for Career & Technical Education (CTE). As a national non-profit student organization, NTHS has been recognizing outstanding student achievement in CTE since 1984. Having served over 1.2 million members in secondary and postsecondary chapters across the country and beyond, NTHS continues to support the next generation of skilled workers and leaders through chapter activities built around our Core Four Objectives of career development, leadership development, service, and recognition.



FORVIA is an automotive technology group offering innovative solutions that make mobility safer, more affordable, customizable and sustainable. With a history stretching back more than a century, we are currently the seventh-largest automotive supplier worldwide – a position giving us a decisive role in shaping the future of the industry.



Since the doors opened, Covenant Academy has been committed to serving the Metro Detroit area and have graduated some of the best C.N.A.'s in Healthcare. Covenant maintains a 99% State pass rate; #One & Done.

This high level of excellence is credited to a dedicated and efficient staff with over 100 years Nursing experience. Ours ustaining motto: "We are fast pace, yet focused; and no studentis left behind".



### **Oakland University Mission Statement:**

Oakland University cultivates the full potential of a diverse and inclusive community. As a public doctoral institution, we impact Michigan and the world through education, research, scholarship, and creative activity.

#### **Oakland University Vision Statement:**

Oakland University will unlock the potential of individuals and leave a lasting impact on the world through the transformative power of education and research.



The U.S. Army Junior Reserve Officers' Training Corps (JROTC) is one of the largest character development and citizenship programs for youth in the world.



The U.S. Army's JROTC program currently operates in more than 1,700 public and private high schools, military institutions, and correctional centers throughout the United States and overseas. Approximately 40% of JROTC programs are in inner city schools, serving a student population of 50% minorities. As JROTC students (Cadets) progress through the program, they experience opportunities to lead other Cadets. A major component of the JROTC leadership and citizenship program is female Cadets. Female Cadets make up 40% of the Cadet population. The JROTC faculty is led by nearly 4,000 instructors who are retired from active duty, reserve duty, or National Guard Army service. Instructors are trained and qualified in accordance with the National Defense Authorization Act 2007 to teach and mentor approximately 314,000 JROTC Cadets annually.



With five campuses throughout Oakland County, OCC offers degrees and certificates in approximately 100 career fields as well as university transfer degrees in business, science, and liberal arts. The College provides academic and developmental experiences allowing each student to reach their full potential and enhance the communities they serve. More than 40,000 students annually attend OCC; more than a million students have enrolled in the College since it opened in 1965. This community college educates students for life-changing careers and provides unique transfer opportunities to excellent four-year institutions.



















SCHOOL DISTRICT OF THE CITY OF PONTIAC

# CAREER AND TECHNICAL EDUCATION PROGRAM

## WHICH CAREER PATHWAY IS RIGHT FOR YOU?

R GUIDANCE COUNSELOR OR CTE DEPARTMENT FOR MORE INFORMATION П

CTE

- Aviation & Aerospace
- Business & Finance
- Education General
- Engineering Technology
- HEALTH SCIENCES
- Information Technology
- JROTC
- MARKETING
- PUBLIC SAFETY



CAREER & TECHNICAL EDUCATION PROGRAMS SUPPORT STUDENTS WORK SKILLS TO HELP THEM SUCCEED IN COLLEGE AND CAREERS. CTE HELPS PROVIDE ALL STUDENTS WITH LEARNING OPPORTUNITIES WHICH WILL HELP THEM DURING & AFTER HIGH SCHOOL, HELP THEM REACH THEIR CAREER GOALS & SET THEM UP FOR WHATEVER

THEIR FUTURE MAY BE!



http://pontiacschools.org