

Pathways to Success

High School Course Description Booklet

2020-2021



Mapping Your Future...

*A Career Pathways Planning & Course Selection Guide
For Students & Parents*



BIG SPRING HIGH SCHOOL

**100 Mount Rock Road
Newville, PA 17241-9466
717-776-2000 ext. 6034**

Dear Big Spring High School Families:

Welcome to planning for the 2020-2021 school year, and beyond!

As Big Spring High School educators, our primary expectation is that all of our students will complete a challenging program of study that prepares them to pursue their postsecondary goals and dreams. A critical initiative that supports students' development of their own program of study are our Career Pathways. In Eighth and Ninth grades, students become familiar with the different Pathways. Near the end of the freshman year, students select one of five Career Pathways to help them:

- Focus on a career area that matches their interests, and
- Set goals and discover classes that connect to specific pathways

In the 2020-2021 Course Description Book you will find important information critical to course and Pathways planning:

- Big Spring High School graduation requirements
- Five Pathway Options and related careers for each
- Recommended sequence of courses
- Specific courses of study for each pathway
- Big Spring High School and Cumberland Perry Area Vocational Technical School course offerings and descriptions

Completing a challenging program of study, which includes a pathway or concentration of courses, is the best predictor of increasing student achievement. We look forward to working with our Big Spring students and parents to make these high school years challenging, gratifying, and a solid foundation for students' postsecondary pursuits.

Sincerely,

William August
Principal



Big Spring High School

www.bigspringsd.org

100 Mount Rock Road

Newville, PA 17241

(717) 776-2000

Dr. Richard Fry, *Superintendent*

Dr. Kevin Roberts, *Assistant Superintendent*

Dr. Robyn Euker, *Director of Curriculum & Instruction*

High School

Administration

William August, *Principal*

Charles Smith, *Assistant Principal*

Joseph Sinkovich, *Assistant Principal/Athletic Director*

Scott Penner, *Dean of Students*

School Counselors

Judy Creps

Jocelyn Kraus

Sherri Webber-Mains

Middle School

Administration

Clarissa Nace, *Principal*

Christopher Boyd, *Assistant Principal*

School Counselors

Amy Craig

Anne Fulker

Mount Rock Elementary

Administration

Karen Ward, *Principal*

School Counselor

Susie Ryan

Newville Elementary

Administration

William Wonders, *Principal*

School Counselor

Kristen Boles

Oak Flat Elementary

Administration

Stacey Kimble, *Principal*

School Counselor

Danielle Bingaman

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Profile of a GRADUATE

BIG SPRING SCHOOL DISTRICT



GLOBAL CITIZEN /
EMPATHETIC ADVOCATOR



CREATOR / INNOVATOR

COLLABORATOR



CONTINUOUS LEARNER

CRITICAL THINKER /
PROBLEM SOLVER



COMMUNICATOR

GLOBAL CITIZEN / EMPATHETIC ADVOCATOR



- Participate effectively in civic life through knowing how to stay informed and understanding governmental processes.
- Exercise the rights and obligations of citizenship at local, state, national and global levels.
- Understand the local and global implications of civic decisions.
- Involved in community service and humanitarian efforts
- Respectful of others in a diverse society
- Digitally literate (digital citizenship)
- Know how to make appropriate personal economic choices.
- Understand the role of the economy in society.
- Act responsibly with the interests of the larger community in mind.
- Demonstrate personal integrity, honesty and ethical behavior.
- Responsible steward of the environment



CREATOR / INNOVATOR

- Use a wide range of idea creation techniques (such as brainstorming, divergent & convergent thinking).
- Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts.
- Demonstrate originality and inventiveness in work and understand the real world limits to adopting new ideas.
- View failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small success and frequent mistakes.
- Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur.
- Supporter of the arts

COLLABORATOR



- Demonstrate ability to work effectively and respectfully with diverse teams.
- Exercise flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal.
- Assume shared responsibility for collaborative work, and value and individual contributions made by each team member.



CONTINUOUS LEARNER

- Set goals with tangible and intangible success criteria.
- Balance tactical (short-term) and strategic (long-term) goals.
- Utilize time and manage workload efficiently.
- Monitor, define, prioritize and complete tasks without direct oversight.
- Go beyond basic mastery of skills and/or curriculum to explore and expand one's own learning and opportunities to gain expertise.
- Demonstrate initiative to advance skill levels towards a professional level.
- Demonstrate commitment to learning as a lifelong process.
- Knowledgeable practitioner of wellness behaviors.
- Self-directed and lifelong learner
- Persist to accomplish difficult tasks and to overcome academic and personal barriers to meet goals.

CRITICAL THINKER / PROBLEM SOLVER



- Collect, assess and analyze relevant information.
- Reason effectively.
- Use systems thinking.
- Make sound judgements and decisions.
- Identify, define and solve authentic problems and essential questions.
- Reflect critically on learning experiences, processes and solutions.



COMMUNICATOR

- Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts.
- Listen effectively to decipher meaning, including knowledge, values, attitudes and intentions.
- Use communication for a range of purposes (e.g. to inform, instruct, motivate and persuade).
- Utilize multiple media and technologies, and know how to judge their effectiveness a priori as well as assess their impact.
- Communicate effectively in diverse environments (including multi-lingual).
- Digitally literate (effective communicator)
- Demonstrate understanding of others' perspectives and needs.
- Listen with an open mind to understand others' situations.
- Learn from and work collaboratively with individuals representing diverse cultures, religions and lifestyles in a spirit of mutual respect and open dialogue in personal, work and community contexts.
- Know when it is appropriate to listen and when to speak.
- Conduct themselves in a respectable, professional manner.
- Respect cultural differences and work effectively with people from a range of social and cultural backgrounds.
- Leverage social and cultural differences to create new ideas and increase both innovation and quality of work.

Big Spring Career Pathways

Big Spring School District

K - 4
Career Awareness



5 - 8
Career Exploration



PATHWAY CHOICE
Arts & Communications
Business, Finance, & Information Technology
Engineering & Industrial Technology
Human Services
Science & Health



BIG SPRING HIGH SCHOOL
9 – 12
Follow Pathway for Course Selection
Career Project Seminar Graduation Project



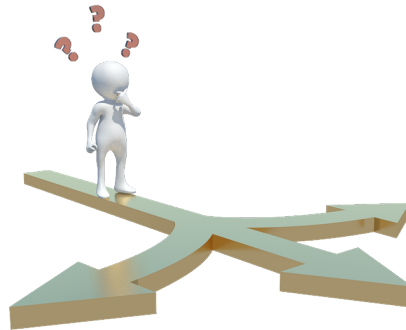
SUCCESSFUL CAREER AND LIFELONG LEARNING

Program of Study

One of the most important choices your child will make while in high school is the type of curriculum to follow. The Program of Studies booklet becomes a valuable tool in making that decision. As parents and students, it is your responsibility to become familiar with the course of study at the high school.

The following pages describe The Program of Study (POS) for each Career Pathway.

Each Pathway curriculum area has identified courses of study, which if followed, will allow the student to make meaningful plans after high school. These plans may include joining the workforce, military, or attending post-secondary education. It is important that students select and pass all courses necessary to meet graduation requirements.



“A program of study (POS) is a comprehensive, structured approach for delivering academic, career, and technical education to prepare students for postsecondary education and career success.”

-- U.S. Department of Education

PATHWAYS TO SUCCESS

Connecting Career, Curriculum, and Character Education

WHAT ARE CAREER PATHWAYS?

Each pathway is a broad group of careers that share similar characteristics and whose employment requirements call for many common interests, strengths and competencies. A chosen Pathway focuses a student's courses toward preparing them for a specific goal area.

WHY SHOULD I CHOOSE A CAREER PATHWAY?

- To help focus on a career area that matches interests in high school
- To help set goals and discover classes necessary to achieve those goals
- To create career awareness and encourage planning for post-secondary education and opportunities
- To provide knowledge that relates your high school education to the world after graduation

HOW DO I CHOOSE A CAREER PATHWAY?

- You will research various career fields in 8th grade and designated career development activities such as Freshman Advisement and Career Project Seminar
- Your counselors, parents, and teachers can assist you with this choice

WILL THERE BE ANY CHANGE IN MY MAJOR ACADEMIC STUDIES?

- No, you will still take all required core courses at the AP, honors, or academic levels
- You will still follow the graduation requirements listed

THE 5 PATHWAY OPTIONS

Arts & Communication (AC)

Designed to cultivate students' awareness, interpretation, application and production of visual, verbal and written work.

FOCUS AREAS:

- Performing Arts
- Visual Arts
- Publishing Arts

Business, Finance & Information Technology (BFIT)

Designed to prepare students for careers in the world of business, finance and information technology.

FOCUS AREAS:

- Marketing, Sales and Service
- Finance
- Information Technology
- Business Management

Engineering & Industrial Technology (EIT)

Designed to cultivate students' interests, awareness and applications areas related to technologies necessary to design, develop, install or maintain physical systems.

FOCUS AREAS:

- Engineering and Engineering Technology
- Construction and Architecture
- Manufacturing
- Transportation, Distribution and Logistics

Human Services (HS)

Designed to cultivate students' interests, skills and experience for employment in careers related to human and family needs.

FOCUS AREAS:

- Counseling and Personal Care
- Education
- Law, Public Safety and Government
- Hospitality and Tourism

Sciences & Health (SH)

Designed to cultivate students' interests in the life, physical and behavioral sciences. In addition, the planning, managing and providing of therapeutic services, diagnostic services, health information and biochemistry research development.

FOCUS AREAS:

- Health Science
- Agriculture, Food and Natural Resources
- Science, Technology and Math

Big Spring High School Graduation Requirements

Utilizing **Career Pathways** and **Core Course Competencies**, Big Spring High School is dedicated to combining academic excellence and hands-on learning to provide a comprehensive, **personalized**, and well-rounded college and career program for all of its students. This individualized plan will allow the student to obtain a high school diploma that meets the needs of each student's post-secondary plan while earning the **required 28.0 credits for graduation**.

9th Grade

Students are required to complete a minimum of 1 credit in each of the following courses: English, Social Studies, Science, and Math. They are also required to complete ½ credit of Pe/health.

*Students may meet the following competencies during this year: Arts/Humanities, Communications, Digital Literacy, and Project Based.

English
Math
Science
Social Studies
Pe/Health
Elective courses in student's Pathway and/or Competencies
Completion of Keystone Exam (Algebra I and Biology)



10th Grade

Students are required to complete a minimum of 1 credit in each of the following courses: English, Social Studies, Science, and Math. They are also required to complete ½ credit of Pe/health. During this year, students will **develop** their **personalized plan** which will be implemented in 11th and 12th grade.

*Students may meet the following competencies during this year: Arts/Humanities, Communications, Digital Literacy, and Project Based.

English
Math
Science
Social Studies
Pe/Health
Elective courses in student's Pathway and/or Competencies*
Completion of Keystone Exam (Literature)

11th Grade

Students are able to create **personalized learning paths** to include the completion of Career Project Seminar, ½ credit of pe/health (11th or 12th grade), 8 additional Core Credits and 10 Competencies which can be met with core cores, electives and/or pathway electives, career internships and work experience.

Career Project Seminar
Pe/Health (11 th or 12 th grade)
Completing some of the 8 additional Core Credit Requirements
Completing Elective courses in student's Pathway and/or Competencies



12th Grade

Students will **continue** to create and **finalize** their **personalized learning paths** to include the completion of Personal Finance, the remainder of their 8 additional Core Credits and 10 Competencies. These can be met with core cores, electives and/or pathway electives, career internships and work experience.

Personal Finance
Completing the remainder of the student's 8 Core Credit Requirements
Completing the remainder of Elective courses in the student's Pathway and/or Competencies
Pe/Health (if needed)

Personalized Diploma Tracking Sheet

STUDENT NAME: _____

ADVISOR: _____

CAREER GOAL: _____

Grade 9/10

- | | | |
|---|-------|-------|
| <input type="checkbox"/> 2 English | _____ | _____ |
| <input type="checkbox"/> 2 Social Studies | _____ | _____ |
| <input type="checkbox"/> 2 Science | _____ | _____ |
| <input type="checkbox"/> 2 Math | _____ | _____ |
| <input type="checkbox"/> 2 PE/Health | _____ | _____ |
| <input type="checkbox"/> Keystone Exams (completed) <input type="checkbox"/> Algebra <input type="checkbox"/> Biology <input type="checkbox"/> Literature | | |

Grade 11/12

___ Personal Finance ___ Career Project Seminar ___ 8 Career Artifacts in Naviance (grades 9-11)

8 Core/Program Credits

Requirements below met by the Core and/or Electives. (No double dipping between competencies)

- | | |
|--|---|
| <input type="checkbox"/> Wellness: _____ | <input type="checkbox"/> Project Based*: _____ |
| <input type="checkbox"/> Global Studies: _____ | <input type="checkbox"/> Literature: _____ |
| <input type="checkbox"/> Research Writing: _____ | <input type="checkbox"/> Art & Humanities*: _____ |
| <input type="checkbox"/> Lab Science: _____ | <input type="checkbox"/> Digital Literacy*: _____ |
| <input type="checkbox"/> Numerical Analysis: _____ | <input type="checkbox"/> Communications*: _____ |

Optional Distinguished Diploma (course earned in grades 9-12)

- ☐ 2 world language credits (same language at High School)
- _____
- ☐ 3 AP courses/PSU Cohort/Ship Start
- _____
- ☐ 5 additional Honors/AP/Dual Enrollment Courses

-
- ☐ Internship, Capstone or Certificate *
 - ☐ 150 Citizenship Hours: school related, community related, career related (Tracking sheet)
 - ☐ GPA Requirement 3.5

Types of Post-Secondary Training

Which Option Suits You?

Type	Description
OJT (On-the-Job Training)	Employer-designed training established for the worker to gain the necessary work skills while he/she is getting paid on the job. Usually these will last weeks to months.
Diploma or Certificate Program	Short-term programs of 6 months to 1 year to gain specific skills to gain employment at the entry level. These can be found at technical schools, community colleges, junior college, and even some universities.
Military Training	All branches of the military have skilled training for 3 years or more. Students can use their GI Bill to pay for college after their discharge or serve for 20 years until retirement with full benefits.
Apprenticeship Programs	Industry-based program training works on the job and in a classroom setting as well. Upon completion the worker will gain journeyman status in the specific industry (3-4 years in length). Apprentices are paid as they go to school.
Associates Degree Programs	These are terminal 2-year degrees allowing the person to gain entry-level employment in a specific career. Many times these workers will begin employment after 2 years of school then go on for future degrees at the employer's expense. Typical locations are community and junior colleges. Some technical schools and universities have associate degree programs.
Bachelor's Degree Programs	These are four-year degrees with a combination of general education course work and specific major. They can be liberal arts colleges, private colleges, public colleges, or universities.
Graduate and Professional Degree Programs	These are the post-graduate fields such as law, medicine, and Ph. D or other professional fields, typically 1 to 5 years beyond a bachelor's degree.

2020-2021 Course Offerings

AGRICULTURE AND TECHNOLOGY EDUCATION

AGRICULTURE COURSES

Advanced FFA Leadership

Grade: 11-12

Credit: 1

Prerequisite: See Special Notations

Description: Do you want to learn how to become a great leader? In this class, students will develop speeches, learn leadership traits, understand how to motivate others while setting goals and improving their time management, write resumes, participate in an interview, and conduct various types of personality surveys to understand their learning style. The class will also read a leadership development book and much more! This course will help any student to better their leadership and teamwork skills that could be used in future careers. Applications for awards, developing a speech, participating in an interview contest, and involvement in the FFA will also be part of the class.

Special Notations: *All students enrolled in any agriculture course are local FFA members; students in this course are highly encouraged to complete the requirements to be an active member at the area and state level. This will allow a student to compete or participate at area, state, and national events. All 9th or 10th grade students must enroll in the Basic FFA Leadership course; the Advanced course is only open to 11th or 12th grade students.*

Pathways: SH, BFIT, HS

Competency: Communication, Research Writing

Animal Science

Grade: 10-12

Credit: .5 **Core Course**

Prerequisite: Biology recommended

Description: This course is designed to expose students to the world of agriculture, animal science, and career options. Students participating in the Animal Science course will have experiences in various animal science concepts with exciting hands-on activities, projects, and problems. Students' experiences will involve the study of animal anatomy, physiology, behavior, nutrition, reproduction, health, selection, and marketing. For example, students will acquire skills in meeting the nutritional needs of animals while developing balanced, economical rations. Throughout the course, students will consider the perceptions and preferences of individuals within local, regional, and world markets.

Special Notations: *This course will have a required lab fee of \$10.00.*

Pathways: SH

Competency: Lab Science, Project Based

Basic FFA Leadership

Grade: 9-10

Credit: 1

Prerequisite: FFA Advisor Recommendation

Description: Leadership is mapping out where you need to go to "win" as an organization. Through this class, students will conquer their fears of public speaking, develop leadership skills to guide themselves and groups of their peers, analyze leaders of society, master communication, both written and oral, and broaden their knowledge about local and state agricultural issues. Students will study the stages of team work, launch their FFA career, develop a career exploration project, and more. Planning and execution of and involvement in FFA activities will also be part of the grade.

Special Notations: *Students in this course are HIGHLY RECOMMENDED to be FFA members. This course is required for Sophomore FFA officers, but any 9th or 10th grade student may take the course.*

Pathways: SH, BFIT, HS

Competency: Communication

Equine Science (Horses)

Grade: 9-12

Credit: .5

Prerequisite: None

Description: This course is a study of the principles and practices dealing with the equine species, so if you love horses, then this is the course for you. It will include an introduction to the history of horses, classification of various breeds, the anatomy and nutrition of the species, and the proper care and handling techniques. This class is highly recommended for a student that is interested in horses or would like to learn more about horses.

Special Notations: *This class is an introductory level course and students with prior horse knowledge must understand that the class will start at the basic level. All students are welcome to take this course.*

Pathways: SH

Competency: Project Based

Essential Home Projects

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Do you want to learn how to complete easy projects at home? Do you want to be able to answer the questions "How do I lay tile and laminate flooring? What is the proper way to mix and pour concrete?" If you would like the answers to these questions and more, then this is the course for you. The course will study the principles and practices dealing with drywalling, flooring, concrete/masonry, laying out a square, and basic car maintenance. This course is designed as a hands-on course where class time will be spent constructing projects in the agricultural laboratory. Please keep in mind that this is a continuation of the Living On Your Own class.

Special Notations: *This course will have a required lab fee of \$5.00 and students should have previously taken Living On Your Own before enrolling in the course.*

Pathways: EIT, HS

Competency: Project Based

Food Science and Safety

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: None

Description: Students in this course will complete hands-on activities, projects, and problems that simulate actual concepts and situations found in the food science and safety industry, allowing students to build content knowledge and technical skills. Students will investigate areas of food science, including food safety, food chemistry, food processing, food product development, and marketing. Research and sustainable design will be highlighted as students develop and conduct industry-based investigations. The culminating project will involve a food product development process that will include many trials and many sampling sessions.

Special Notations: *This course will have a required lab fee of \$10.00.*

Pathways: SH, HS

Competency: Lab Science, Project Based

Introduction to Agribusiness

Grade: 11-12

Credit: 1 **Core Course**

Prerequisite: None

Description: Introduction to Agribusiness introduces students to business management in agriculture. Mathematics, reading, and writing components are woven in the context of agriculture. Throughout the course are practical and engaging activities, projects, and problems to develop and improve business and employability skills. Additionally, students investigate and develop viable business plans in order to solve local problems. The business plan ideas are communicated to student peers and members of the professional community.

Special Notations: *This course is weighted for cumulative GPA calculation. This course fulfills the graduation requirement of Personal Finance for seniors.*

Pathways: SH, BFIT

Competency: Digital Literacy, Project Based

Living on Your Own

Grade: 9-12

Credit: .5

Prerequisite: None

Description: It is important for all students to learn how to conserve electricity while saving money, understand the safe practices while riding an ATV, and install/repair plumbing and electricity into their home. These activities can help a student to save money not only now, but also when they become a homeowner. This is an introductory course to basic home maintenance. The student's will focus on the study of the previously stated items, and create projects or complete laboratory practices that will help them to understand these components.

Special Notations: *This course will have a required lab fee of \$5.00.*

Pathways: EIT, HS

Competency: Project Based

PA Fish and Wildlife Management

Grade: 9-12

Credit: .5

Prerequisite: None

Description: This course covers four areas in the wildlife field: fish, mammals, water quality, and management. The students will study various Pennsylvania species that affect our environment, and some of these species will include whitetail deer, black bear, coyotes, owls, and more. Throughout the course, students will watch wildlife videos, dissect owl pellets, complete hands-on labs, and participate in wildlife activities. This is a great course for students who would like to learn more about Pennsylvania wildlife species, and how conservation has evolved over the years.

Pathways: SH

Competency: Project Based

Plant and Greenhouse Science—Science Credit

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: None

Description: Do you want to learn how to grow, sell, and care for plants both in a greenhouse and in your own yard while having fun and earning science credits? This course will provide the answers to this question, and so much more! Plant and Greenhouse Science will involve the study and hands-on applications of basic plant science, greenhouse management, floral design, vegetable gardening, plant structures, basic landscaping, and more. The class will raise various types of flowers, vegetable plants, and Monarch Butterflies in the greenhouse. Many class days will be spent working in the school's greenhouse and conducting hands-on labs and experiments.

Special Notations: *This course will count as one high school science credit. See Mrs. Fulton (room 143) for more information.*

Pathways: SH

Competency: Lab Science

Science of Animal Agriculture

Grade: 10-12

Credit: .5

Prerequisite: None

Description: This course teaches the basic concepts involved in the production of agricultural animals. Content will include qualifying animal agriculture as a science, scientific classification, quality assurance of animal production, evaluating the methods and recommendations of Temple Grandin, designing a comprehensive housing plan, and studying animal management. Students will have the opportunity to earn industry certification in quality assurance. This course may be formatted in a manner that requires students to engage in independent learning.

Pathways: SH

Competency: Digital Literacy, Project Based

Small Animal Science

Grade: 9-12

Credit: .5

Prerequisite: None

Description: This course is designed to introduce students to the use, breeds, anatomy, selection, breeding, nutrition and handling of small animals as pets. Units covered in this course include: History of Domesticated Animals, Dogs, Cats, Ornamental Fish, Birds, and Exotic Animals. This will be a science-oriented class and students are expected to analyze the purpose behind the use and development of animals. This course serves as an introduction to the animal sciences and is designed for the student who wishes to learn more about taking care of their own companion animals and the student who is interested in studying animals in the future for a career.

Pathways: SH

Competency: Project Based

Small Gas Engines

Grade: 10-12

Credit: .5

Prerequisite: None

Description: This is a study of principles and practices in the service and repair of small gas engines. All students will be provided with a 3.5 to 6 horsepower Briggs and Stratton engine and all of the necessary tools. The students will have the option to work on a vertical shaft or horizontal shaft engine, including the overhead valve series. Students will learn engine parts, tools, and the necessary components needed to disassemble and assemble an engine. When students are completed with the class, they should be able to perform basic troubleshooting techniques on small gas engines.

Special Notations: There may be a required lab fee in the 2020-2021 school year. Cost for a student may vary if he/she breaks an engine part or tool and/or loses a tool from his/her toolbox.

Pathways: EIT, SH

Competency: Project Based

Supervised Agriculture Experience (Record Book)

Grade: 9-12

Credit: 1 **Core Course (SH Pathway Only)**

Prerequisite: FFA Membership

Description: This course is required for any FFA member who is in one of the FFA Leadership classes, plans to show an animal at the Shippensburg Fair or Farm Show, and would like to obtain their FFA degrees and/or any member who would like to maintain an SAE project. Record keeping skills in budgeting, inventory, receipts, expenses, and net worth will be taught as well as maintaining a daily log. Students can earn awards by submitting their completed books to the county and state level. All books will be evaluated 3 times a year for a grade.

Special Notations: Students must turn in their records on the assigned due dates in order to receive a grade and a credit for the class.

Pathways: SH, BFIT

Competency: Communications

Veterinary Science

Grade: 11-12

Credit: .5 **Core Course**

Prerequisite: Biology and Animal Science

Description: This course is designed to expose students to provide an overview of basic practices and skills used in veterinary medicine. Students will review livestock, physiology, ruminant microbiology, and small animal care, while learning the skills of dissection, injections, medication dosage, first aid care, routine physical exams and surgical techniques. Industry leadership and business applications will also be included.

Special Notations: This course will have a required lab fee of \$10.00.

Pathways: SH

Competency: Lab Science, Project Based

Welding

Grade: 10-12

Credit: .5

Prerequisite: None

Description: This is an introductory study of principles and safe practices in agricultural welding. This course focuses on oxyacetylene cutting and welding, electric arc welding, MIG welding, and Plasma Arc Cutting. Students in this course are required to pass all safety tests with 100% before working in the shop (multiple attempts are permitted). There is equal time spent in theory and practical instruction in this class. Students may be permitted to design and construct their own projects with provided materials.

Special Notation: This course will have a required lab fee of \$10.00

Pathways: EIT

Competency: Project Based

TECHNOLOGY AND ENGINEERING COURSES

Architectural Design

Grade: 9-12

Credit: 1

Prerequisite: None

Description: This is an introductory course dealing with basic residential components, drafting techniques and Computer Aided Drafting and Design (CADD) components of architectural design. By using the design process, this course will allow students to explore the various components that are involved in the overall house planning and construction. After completing the course, the students will leave with a general understanding of residential architecture and will have completed sets of residential home floor plans created with AutoDesk Revit Architecture software package, the most common software used in the architecture field.

Special Notation: These floor plans can be used in a college application portfolio for prospective architecture students.

Pathways: EIT

Competency: Project Based

Civil Engineering

Grade: 10-12

Credit: .5 **Core Course EIT Pathway Only**

Prerequisite: None

Description: This course provides an overview of the fields of Civil Engineering. This course covers topics such as: The Roles of Civil Engineers, Project Planning, Site Planning, Building Design, Surveying, Topography, and Bridge Design and Construction. Course Material and projects should be enhanced through participation in Technology Student Association challenges.

Pathways: EIT

Competency: Project Based, Digital Literacy

Electronics

Grade: 10-12

Credit: 1 **Core Course EIT Pathway Only**

Prerequisite: None

Description: In this course, students will gain skills and knowledge through classroom and lab activities in the areas of basic DC and AC circuits, circuit components, testing, electromagnetism and inductance, capacitance, power supplies, power generation and distribution. Students will learn the safe use of the tools, test instruments, equipment and supplies used in this course plus information on career opportunities in this field. Hands-on and problem solving activities will expose students to areas of electron theory, Ohm's Law, insulators, conductors, and electronic components. Participation in Technology Student Association (TSA) would help to enhance the learning opportunity and provide practical application of the course material that is taught.

Pathways: EIT

Competency: Project Based, Lab Science, Digital Literacy

Engineering Design

Grade: 10-12

Credit: 1 **Core Course EIT Pathway Only**

Prerequisite: Introduction to Drafting

Description: This course will allow students to have a greater understanding of the overall design process and how engineering plays a fundamental role incorporating drafting communications. This class provides students the opportunity to work with advanced features of AutoCAD and Inventor software packages to design and create 3D models and 3D printed projects. Additionally, students will be applying engineering principles to hands-on problem-solving activities and product development projects incorporating "real world" constraints to the design process.

Special Notation: \$10 Lab Fee

Pathways: EIT

Competency: Project Based

Green Engineering

Grade: 10-12

Credit: .5

Prerequisite: None

Description: This course will provide an overview of various sustainable engineering concepts related to solar power, wind power, water filtration, and solar fuel cells. Students will also learn many different ways to implement sustainable technologies, materials, and energy for their personal use through many different hands-on projects.

Special Notation: \$10 Lab Fee

Pathways: EIT

Competency: Project Based, Communications, Digital Literacy

Honors Technology Education Capstone Course

Grade: 11-12

Credit: 1 **Core Course EIT Pathway Only**

Prerequisites: 3 previous Technology Education Classes

Description: The Big Spring High School Technology and Engineering Capstone Course is designed to provide you with the opportunity to apply all that you have learned in the four years of high school to a project which will extend your learning, stretch your potential, and challenge your abilities. Completed during the senior year, the work of the Capstone Course consists of four major pillars: research paper, product/performance, portfolio, and presentation. The goal is to choose a topic of interest to you and explore it. This might include investigating a topic you have always been curious about or choosing something you know a little bit about and taking your understanding of it to a new and challenging level.

Pathways: EIT

Competency: Project Based, Digital Literacy

Introduction to Drafting

Grade: 9-12

Credit: .5

Prerequisite: None

Description: This introductory course deals with learning drafting fundamentals and basic engineering principles. Students will become familiar with drafting tools, methods, and processes, which are used by industry. Throughout the course, students will develop and practice drafting skills and techniques in order to communicate the drafting language properly. This course will also allow students to explore the area of CADD (Computer Aided Design and Drafting) with the use of the latest version of AutoCAD. This course focuses on mechanical drawings such as multi-view, isometric, and section drawings. Additionally, students will be introduced to 3D modeling and 3D printing.

Pathways: EIT

Competency: Project Based

Robotics

Grade: 10-12

Credit: 1 **Core Course EIT Pathway Only**

Prerequisite: None

Description: No prior robotics experience is required; the curriculum is created to ensure students with varying learning styles and levels can accomplish goals by sequentially working through units, gradually increasing application of new skills. Additionally, students can advance in their skills to create fully autonomous robotic systems utilizing block programming through industry standard C++ programming environments. This is a hands-on, project-based course utilizing VEX Robotics systems for students to apply learning in creating robots through a series of design challenges.

Pathways: EIT

Competency: Project Based, Digital Literacy

SkyOp Drone Training

Grade: 10-12

Credit: .5

Prerequisite: None

Description: SkyOp's Drone Training Curriculum takes high school juniors and seniors from beginners to FAA-certified commercial drone pilots, ready to do aerial imaging, data collection, and autonomous flight programming.

Our unique and proven curriculum includes:

- **Intro to Drones:** Students will receive a basic overview of drones, how they function and fly, while also learning to fly effectively without GPS, and discuss how drones are currently being deployed for commercial and public safety use.
- **Part 107 Test Prep:** Students will gain an understanding of the safety and operational requirements necessary to successfully complete the FAA Unmanned Aircraft – General test and become fully-licensed drone pilots.
- **Hands-On Drone Flight Training – DJI Phantom 4 Pro:** Students will receive comprehensive outdoor flight training on the versatile DJI Phantom 4 Pro including all of its advanced features.
- **Intro to Autonomous Drone Apps with Hands-On Flight Training:** Students will learn to program autonomous missions, becoming proficient in the execution of the autonomous flight protocols which enable many commercial drone deployments.

Special Notations: Students must be 16 years of age as of September 1st to be eligible for the class. Students will have the option to take the FAA Drone Certification exam upon completion of the course.

Pathways: EIT

Competency: Project Based

Structural Engineering

Grade: 10-12

Credit: 1

Prerequisite: None

Description: Students will develop a basic understanding of the design and behavior of structures. Through laboratory activities, students will learn how structures are designed, why certain materials are used, how structures withstand loads, and the impacts of structures on societal, biological, and technological systems.

Special Notation: \$10 Lab Fee

Pathways: EIT

Competency: Project Based

Technology and Its Impacts

Grade: 9-12

Credit: .5

Prerequisite: None

Description: This "Makerspace" course will consist of separate units that aim to move the student from more prescribed, controlled projects to open-ended, self-initiated work. The first few weeks aim to introduce students to the space, the materials, and some basic skills that will be useful in all future projects. The majority of the year will be spent with the students doing self-guided work. The philosophy behind this is that we want students to take ownership of their work, and thereby become genuine problem-solvers. At the same time, we recognize that certain skills need to be taught, and certain protocols need to be learnt when using tools in a makerspace.

Special Notation: \$10 Lab Fee

Pathways: EIT

Competency: Communications, Project Based

Transportation Engineering

Grade: 10-12

Credit: .5

Prerequisite: None

Description: This course focuses on developing a basic understanding of the behavior of land, water, air, and space transportation systems. Students engage in problem solving activities to design, produce, test, and analyze transportation systems while studying the technical subsystems of propulsion, structure, suspension, guidance, control, and support.

Special Notations: \$10 Lab Fee

Pathways: EIT

Competency: Project Based, Digital Literacy

Wood Production

Grade: 10-12

Credit: .5

Prerequisite: Wood Technology

Description: This is the final course in woodworking technology. Students at this level are expected to apply advanced woodworking techniques learned in Wood Technology. Students in the course will continue to advance in wood working techniques learning new processes using machines and power tools. Students can design a project or select one from an assortment of options. The project includes: completed working drawings, list of materials, construction procedure, board foot and cost computations. **Students will pay for their material before work can begin.**

Pathways: EIT

Competency: Project Based

Credit: 1

Prerequisite: None

Description: This is an introductory course designed to develop student appreciation of problem solving in woodworking technology. Students receive instruction in the following: machine, tool, and personal safety, correct working habits and attitudes, custodial laboratory maintenance, and the proper use of materials, tools, and processes required to successfully plan and construct small wood products in the allotted course time. Emphasis is placed on the development of fundamental problem solving and woodworking skills necessary for good craftsmanship. All students must pay for materials used before any construction begins.

Special Notation: Cost per student for materials used in required projects is \$18.00-\$30.00.

Pathways: EIT

Competency: Project Based

ART

AP Studio Art (Level IV Drawing and Painting)

Grade: 11-12

Credit: 1 **Core Course (AC Pathway Only)**

Prerequisite: "B" average or higher in Honors Drawing & Painting III is recommended

Description: Congratulations! Because of the high level of work you have produced and the grades you have earned in previous art courses, you are qualified to continue your studies in this class. The final goal is the completion of a portfolio suitable for application to the AP Portfolio Review in May. You will be working independently under Art Department advisement to develop work for the Sustained Investigation section of the portfolio. This course is run like an independent study.

Special Notations: Offered fall Semester only. It is recommended that students enrolled in AP courses take the AP Exam. This course is weighted .5 for a cumulative GPA calculation. There will be required summer work that will help fulfill parts of the AP Portfolio requirements. There will be a fee for the portfolio review in May (similar to the AP Exam fee). Students are responsible for the art supplies for the concentration section of the AP Portfolio.

Pathways: AC

Competency: Arts and Humanities, Project Based

Ceramics I

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Students who enjoy working with clay, or have never worked with clay will learn the hand-building techniques: Pinch, Slab and Coil. Students will also become familiar with the firing process and be introduced to glazing. Students will be constructing ceramic pieces that will be able to be taken home.

Special Notation: Prerequisite course for Ceramics II

Pathways: AC

Competency: Arts and Humanities, Project Based

Ceramics II

Grade: 10-12

Credit: 1

Prerequisite: "C" average or higher in Ceramics I is recommended

Description: Students who enjoyed working with clay in Ceramics I will learn to use the potter's wheel to throw pieces rather than hand build them. Students will continue to work through the firing process and learn about reclaiming the clay. Students will leave the class with a collection of thrown pieces that can be used (microwave and dishwasher safe).

Pathways: AC

Competency: Arts and Humanities, Project Based

Digital Photography I

Grade: 9-12

Credit: .5 Credit

Prerequisite: None

Description: Do you like to take pictures? Do you want to learn how to take great pictures? Digital Photography I will teach you how to compose great photos. You will also learn techniques for fixing and manipulating your images in the computer. This course relies heavily on the use of computers to share, work with, and save digital files. This class also requires frequently taking pictures outside of the school day over the entire quarter as homework.

Special Notations: *It is strongly recommended that you have a basic understanding of using computers to organize and work with digital files. It is also strongly recommended that you have access to a digital camera (Cell phone camera, Point & Shoot camera, or DSLR camera) of your own, as photo shoots will be primarily done outside of class. Cameras are available for sign out if needed.*

Pathways: AC

Competency: Arts and Humanities, Project Based, Digital Literacy

Digital Photography II

Grade: 10-12

Credit: 1 Credit

Prerequisite: "C" average or higher in Digital Photography I is recommended

Description: So you've learned to compose some good pictures in Digital Photography I. Now you will be learning more technical aspects of using a camera. More time will be focused on learning the ins and outs of a DSLR as well as exploring different ways that photography is used in our society. Students will be working in a more independent learning setting during the course. The second quarter of the course will be a student choice setting where students choose the work that they are working on. The capstone (final Exam) will be the completion of a website, to be published online, that showcases the student's work from the second quarter.

Special Notations: *It is strongly recommended that you have access to a digital camera of your own (Cell Phone cameras will not be as useful in this level, a digital point and shoot or DSLR is preferable), as photo shoots will be primarily done outside of class. Cameras are available for sign out if needed.*

Pathways: AC

Competency: Arts and Humanities, Project Based, Digital Literacy

Drawing & Painting I

Grade: 9-11

Credit: 1 Credit

Prerequisite: None

(Seniors may only be scheduled for Drawing & Painting I in the fall IF they also have Honors Drawing & Painting scheduled in the spring.)

Description: **"I love Art but can't draw." "I love to draw but want to improve."** Does this sound like you? If you are willing to put in the time and effort to learn the "right" way, then this is the class for you. You'll be amazed at the results! You will discover how artists brought new ideas and techniques into the art world and how you can incorporate those ideas into your own fabulous artwork using paint, charcoal, pencil, and ink.

Special Notations: *Prerequisite course for Honors Drawing & Painting. Materials fee of \$10 - \$20 for the course.*

Pathways: AC

Competency: Arts and Humanities, Project Based

Drawing & Painting II

Grade: 10-12

Credit: 1 Credit

Prerequisite: "C" average or higher in Drawing & Painting I is recommended

Description: **Bring on the color and Paint!** You've discovered that you have some pretty decent drawing skills, and now you want to learn more. This class builds on Level 1, but with some new twists. Color and composition take a front seat as you continue to develop your observational skills. Along the way, you'll explore the endless possibilities of acrylic paint and revisit pencil, ink, and charcoal as you integrate different styles and approaches into your work.

Special Notations: Prerequisite course for Honors Drawing and Painting III. Materials fee of approximately \$30 for the course if students do not already have the supplies.

Pathways: AC

Competency: Arts and Humanities, Project Based

Honors Art Humanities

Grade: 11-12

Credit: 1 **Core Course for AC Pathway only**

Prerequisite: It is recommended that students have a "B" average or higher overall GPA

Description: Are you interested in art, but feel you lack artistic ability? Are you a skilled art student who wants to learn more about famous art and artists? Rather than dealing with the **making** of art, this is a course **about** art. Learn the stories behind some famous masterpieces. Discover how and why humans have created art since the earliest times. Reflect on the historical significance of art, and consider how art relates to the world around us. Open to anyone who meets the GPA requirement for an honors course.

Pathways: AC

Competency: Arts and Humanities, Research Writing

Honors Drawing and Painting III

Grade 11-12

Credit: 1

Prerequisite: "B" average or higher in Drawing and Painting II is recommended

Description: Honors Drawing and Painting III, is designed for students who excel in art. You will continue developing mastery in concept, composition, and execution of ideas in both drawing and painting with more of an emphasis on the three philosophies of Art: Imitationalism, Expressionism, and Formalism. Here's your chance to finally get creative! Subject matter will be interpreted with lots of room for individual interpretation and creativity. This class is a prelude to AP Studio and will concentrate on the completion of works required in the "Breath" section of the AP portfolio.

Special Notations: Prerequisite course for AP Studio Art. Materials fee of approximately \$30 for the course if students do not already have the supplies.

Pathways: AC

Competency: Arts and Humanities, Project Based

Sculpture I

Grade: 10-12

Credit: 1

Prerequisite: None

Description: Students who enjoy working with their hands will explore basic methods and materials of sculpture. Studio assignments will challenge students to combine common sense, craftsmanship, creativity, and aesthetics. Students will be addressing the elements and principles of design and effectively critiquing their own work.

Special Notation: Prerequisite course for Sculpture II.

Pathways: AC

Competency: Arts and Humanities, Project Based

Credit: 1

Prerequisite: "C" average or higher in Sculpture I is recommended

Description: Students who enjoyed working with their hands in Sculpture I will continue working with similar concepts, methods, and materials. Sculpture II will concentrate on the human form as the basis for each project. Students will have the opportunity to hone observation skills with an emphasis on proportion, composition, and creative problem solving.

Pathways: AC

Competency: Arts and Humanities, Project Based

BUSINESS EDUCATION

Accounting I (HACC)

Grade: 11-12

Credit: 1 (4 College Credits) **Core Course BFIT Pathway Only**

Prerequisite: None

Description: Students will be introduced to accounting principles and procedures by learning the accounting concepts of the accounting cycle by looking at a one owner service business and a merchandising business that is set up as a partnership. Students will also be able to analyze and interpret the financial operations of a business.

Special Notations: This course is a dual enrollment course taught at Big Spring, and participating students may earn 4 college credits through the Harrisburg Area Community College. Students interested in taking this course as a dual enrollment course must complete HACC's application and pay the course fee. This course is weighted .5 for cumulative GPA. See your counselor or Mrs. Munson for more information regarding this course.

Pathways: BFIT, HS

Competency: Numerical Analysis

Accounting II

Grade: 10-12

Credit: 1

Prerequisite: Accounting I

Description: Introduction to generally accepted accounting principles as they pertain to external financial reports. The accounting cycle, accounting systems, theories and policies relative to asset valuation, liability measurement, and income determination are presented. Emphasis is placed on accounting from sole proprietorships and partnerships.

Pathways: BFIT, HS

Competency: Numerical Analysis

Career Project Seminar

Grade: 11

Credit: .5

Prerequisite: None

Description: This nine-week course helps students choose a career path they are interested in pursuing. Students will develop a resume and cover letter, as well as participate in a mock interview and a job shadow.

Special Notation: This course is a graduation requirement.

Pathways: All

Event Planning

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Would you like the opportunity to plan parties and events? This class will teach you proper business etiquette while planning actual events. Students will use Microsoft Office Suite for desktop publication, presentation and budgeting.

Pathways: AC, BFIT

Competency: Project Based

Exploring Presentations

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Do you want to set yourself apart from others in the business world? This course is designed to acquaint students with advanced features of Microsoft PowerPoint 2019 software. Emphasis will be placed on creating eye-catching presentations and learning how to properly present to an audience.

Pathways: All

Competency: Communications, Digital Literacy

INCubatoredu

Grade: 10-11

Credit: 1 **Core Course BFIT Pathway Only**

Prerequisite: None

Description: This course is designed to get students excited about becoming true entrepreneurs. Students will have the opportunity to create and fully develop their own product or service. Real-world entrepreneurs and business experts will serve as coaches and mentors guiding student teams through the process of ideation, market research, and business plan development. Over the course of the year, student teams will learn about marketing, accounting, human resources, as well as the legal aspects of running a business to get them geared up for their Pitch. Pitches put student teams in front of actual investors to pitch their innovative idea and possibly win funding to turn their business plans into reality during the summer and following school year.

Special Notations: *This course is pending approval as a dual enrollment course through Harrisburg University where students can attain anywhere from 4-7 credits. This course can be taken as a dual enrollment course or for Big Spring credit. This course will be weighted.*

Pathways: BFIT, EIT, HS, AC

Competency: Project Based

Launch PAD (Previously Future Business Leaders)

Grade: 9-10

Credit: 1

Prerequisite: None

Description: This course is an introductory course where students will develop skills in leadership development to the world of business with an emphasis in business. Topics covered include forms of business organizations, leadership roles within a business, product life, entrepreneurship, and the basics of writing a business plan. Students will compete in the Business Plan Challenge for scholarship opportunities along with having the opportunity to network and work with business professionals.

Pathways: BFIT

Competency: Communications, Project Based

Marketing and Advertising

Grade: 9 -12

Credit: .5 **Core Course BFIT Pathway Only**

Prerequisite: None

Description: This course will introduce students to basic marketing terminology and concepts with emphasis on advertising. Students will learn how different businesses target consumers and will be introduced to different types of mediums of advertising such as TV, Internet, and magazine print along with the pros, cons, and costs of each.

Pathways: AC, BFIT, HS

Competency: Digital Literacy

Personal Finance

Grade: 12

Credit: .5

Prerequisite: None

Description: This course is designed to teach students how to responsibly and effectively manage their money. Students will learn how to set financial goals, budget their money, save and invest their money, open and maintain a checking account, use credit effectively, and distinguish between the different sources of credit.

Special Notation: This course is a graduation requirement.

Pathways: All

Retail Management

Grade: 9-12

Credit: 1

Prerequisite: None

Description: This is a year-long course that will teach the concepts of owning and operating a retail store through the operation of the school store during and after school, fulfilling online orders, and ordering apparel for Bulldog teams. Students will learn how to manage inventory, market products, make purchasing decisions, order products to be sold, and a variety of related skills and tasks.

Pathways: BFIT, AC, HS

Sports and Entertainment Management

Grade: 9-10

Credit: .5

Prerequisite: None

Description: The field of sports and entertainment is growing. General principles of management are presented through this course and are intended to be a guide in taking your first career step into the exciting world of sports and entertainment.

Pathways: BFIT, EIT

Competency: Project Based

Video Game Design I

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Do you wonder how your favorite game was built? Do you have a great idea for an original game? Join this class and learn the complete process of making single-player games in Gamemaker Software. Create the entire life cycle of a game in 4 different projects and finally demonstrate your expertise by creating and developing a complete single player game.

Pathways: BFIT, EIT

Video Game Design II

Grade: 9-12

Credit: .5

Prerequisite: Successful completion of Video Game Design I

Description: Love to play 2-player games? Want to know how to build them? Sign up for Video Game Design 2. Students will be working with advanced settings, logical statements, and multi-player levels to create 4 incredible games in Gamemaker. To finish your journey, students will create a 2-player game.

Pathways: BFIT, EIT

Web Page Design

Grade: 9 -12

Credit: .5

Prerequisite: None

Description: Always wanted to see what it would be like to make real authentic web pages for a living? Wanted a class that allows you the freedom to give back to teachers, clubs, organizations and maybe used in your current career path or in higher education? Then, Web Page Design is a class you must take. This Project-Based class allows you to learn and explore how to create a fully functioning HTML Web Page from scratch; and to end the experience, you will develop a fully functioning page for your club, teacher, and or organization. If you wish, this class will also prepare you to be successful on the W3Schools HTML Certification Exam.

Pathways: AC, BFIT

Career Opportunity Electives

ACE Mentoring Program

Grade: 10-12

Credit: .5

Prerequisite: None

Description: This is an after-school program that gives students a hands-on introduction to careers in architecture, construction management, and engineering. Industry professionals meet with the students at the Cumberland-Perry Vo-Tech once a week from 5:00 p.m. until 6:30 p.m. from October through March. Transportation and a one-time fee of \$70 are the student/parent's responsibility. For more information, see Mrs. Black.

Pathways: All

Career Internship

Grade: 11-12

Credit: .5-5 (credits possible) **Core Course**

Prerequisite: None

Description: This program is a supervised, paid or non-paid occupational experience at a school-approved site. Students are given the opportunity to explore their intended career field to gain a better understanding and appreciation of the field and to help make more informed decisions regarding career choices and post-secondary education. Transportation and related costs of participation are the student/parent's responsibility. For more information, see Mrs. Black.

Special Notation: A teacher recommendation is required.

Pathways: All

Competency: Communications, Project Based

HACC Emergency Medical Technician Program

Grade: 11-12

Credit: 2 **Core Course HS Pathway Only**

Prerequisite: None

Description: This course is offered through HACC during Semester II. Students will gain the knowledge and skills required to provide basic pre-hospital emergency care. The class is held at Cumberland Goodwill EMS Station in Carlisle. Tuition for the course is \$825. Transportation and related costs of participation are the student/parent's responsibility. For more information, see Mrs. Black.

Pathways: All

Health-Care Career Exploration Program

Grade: 12

Credit: 1

Prerequisite: None

Description: This program is available through a partnership with Geisinger Holy Spirit. Students spend the first quarter of their senior year exploring the many career opportunities offered at a large healthcare facility. Students are selected through an application and interview process. Only two students from Big Spring are selected to attend. Transportation and related costs are the student/parent's responsibility. For more information, see Mrs. Black.

Pathways: All

Nursing Assistant Program

Grade: 11-12

Credit: 1 **Core Course SH Pathway Only**

Prerequisite: None

Description: The nursing assistant program allows students the opportunity to become a certified nurse assistant (CNA). Classes are taught by HACC instructors at a long-term health care facility or at Carlisle High School. This course is offered during Quarter 1 and 3 only. Enrollment in this course requires a health exam, 2-step PPD, flu shot, as well as a criminal history check. Tuition for this course is \$1098. Transportation and related costs (scrubs, white shoes, watch) of participation are the student/parent's responsibility. For more information, see Mrs. Black.

Pathways: All

Passion through the Process Business Program

Grade: 12

Credit: 1

Prerequisite: None

Description: This is a ten-week program where seniors chosen from 10 mid-state school districts have the opportunity to spend 90 minutes each day exploring careers at the JDK Group in Camp Hill. During the first five weeks students will rotate through five departments. The departments included are Sales/Event Planning, Marketing, Warehouse Management, Operations, and Culinary. Participating students will then pick a specific department to concentrate on during the final five weeks. Transportation and related costs of participation are the student/parent's responsibility. For more information, see Mrs. Black.

Pathways: All

PULSE Program

Grade: 10-12

Credit: .5

Prerequisite: None

Description: This is an after-school program taught at the Milton S. Hershey Medical Center. PULSE aims to cultivate interest in medicine, biomedical science and healthcare systems science by introducing learners to medical students, biomedical researchers and practicing clinicians. Students attend lectures, review patient cases, and gain shadowing opportunities. Transportation and related costs of participation are the student/parent's responsibility. For more information, see Mrs. Black.

Pathways: All

ENGLISH

English I

Grade: 9

Credit: 1

Prerequisite: None

Description: This course will focus on preparing students to read and write on a rigorous level. Students will read and analyze major works of literature including short fiction, drama, and poetry from the textbook and selected novels and plays all within thematic units. Students may also be given the option to choose some of their own reading. Students will write persuasively, informatively, in narrative, and creatively in addition to completing research-based projects. Vocabulary exercises will be included as well.

Special Notation: English I and English II are sequential.

Pathways: AC

Academic English II

Grade: 10

Credit: 1

Prerequisite: English I

Description: Students will read and discuss works of fiction and nonfiction to develop and improve reading, comprehension, and critical thinking skills. Course work emphasizes literary elements, rhetorical devices, and text structures and provides students with an opportunity to improve their written expression skills in preparation for the state Keystone Exam. A research project to review basic components of research including finding, evaluating, and attributing information from a variety of sources will be required.

Special Notation: English I and English II are sequential.

Pathways: AC

AP English Literature and Composition

Grade: 11 or 12

Credit: 1 **Core Course**

Prerequisite: Academic English II or Honors English II

Description: Students will further enhance their skills of critical analysis in both literature and composition through a study, both wide and deep, of classic and modern fiction, poetry and drama. Students will be expected to take the AP Exam in May. Success in this exam may result in advanced college credit, placement, or both.

Special Notations: It is recommended that students enrolled in AP courses take the AP Exam. AP English is weighted .5 for a cumulative GPA calculation.

Pathways: AC

Competency: Literature, Research Writing

AP English Language and Composition

Grade: 11 or 12

Credit: 1 **Core Course**

Prerequisite: Academic English II or Honors English II

Description: This course serves to prepare students to take the AP Language and Composition exam, which aligns with introductory college-level rhetoric and writing. Students will develop evidence-based analytical argumentative essays through several stages or drafts, and students will evaluate, synthesize, and cite research to support their arguments. Throughout the course, students will develop a personal style by making appropriate grammatical choices. Additionally, students will read and analyze rhetorical elements and their effects in non-fiction texts from various disciplines and historical periods.

Special Notations: It is recommended that students enrolled in AP courses take the AP Exam. AP English is weighted .5 for a cumulative GPA calculation.

Pathways: AC

Competency: Research Writing

College Preparatory English

Grade: 11 or 12

Credit: 1 **Core Course**

Prerequisite: Academic English II or Honors English II

Description: This course is designed for students who are planning to attend a four-year college. Students will examine major literary themes through reading novels, short stories, plays, poems, and nonfiction works that reflect a variety of societies and cultures. In composition, students will analyze literary selections and complete a college-level research paper or series of research projects. Literature circles, Socratic seminars, class discussions, and compositions will encourage analytical and critical thinking.

Pathways: AC

Competency: Research Writing, Literature

Creative Writing

Grade: 9-12

Credit: .5 **Elective Course**

Prerequisite: None

Description: This course stresses creativity and individualized projects. Students will read and discuss their own work. Students will also complete the peer editing process. In addition, students will read published poetry, fiction, plays and personal essays. Students will write poetry, short stories, skits, and narratives.

Pathways: AC

Competency: Project Based

English IV - Opus

Grade: 12

Credit: 1 **Core Course**

Prerequisite: Real World Literature, College Preparatory English, AP Literature and Composition or AP Language and Composition

Description: In this project-based course, students will focus on technical writing and readings related to their vocational areas of interest and expertise. Readings will focus on nonfiction, particularly industrial and professional materials that lead to job certifications. Regarding composition, students will create technical manuals and brochures accompanied by "how-to" videos that might be used by the average homeowner. For example, those students hoping to train as Emergency Medical Technicians, will focus on relevant material related to first aid and demonstrate basic life-saving procedures. Those training to enter the area of plumbing will read materials, produce writing, and develop demonstrations that align with the knowledge base in that field.

Special Notations: Students interested in taking this course must already be employed in a career related field or be participating in one of the following programs: Vocational-technical, internship, work experience, cooperative education, or be an active member of FFA.

Pathways: AC, BFIT

Competency: Research Writing, Project Based

Honors English II

Grade: 10

Credit: 1

Prerequisite: English I

Description: Students will read and discuss works of fiction and nonfiction to develop and improve reading, comprehension, and critical thinking skills. Course work emphasizes literary elements, rhetorical devices, and text structures and provides students with an opportunity to improve their written expression skills in preparation for the state Keystone Exam. A research project to review basic components of research including finding, evaluating, and attributing information from a variety of sources will be required.

Special Notations: *The Honors English section is designed for students who have demonstrated superior communication skills. It is recommended that a student has a B average or above in prior academic English courses. The students will be expected to address reading, writing, and research assignments thoroughly and quickly. The course will be concept-oriented with an emphasis on creative and abstract thinking. Summer reading and other enrichment activities are part of this course. English I and English II are sequential.*

Pathways: AC

Honors English / Honors World Studies

Grade: 11-12

Credit: 2 **Core Courses**

Prerequisite: English II, Honors English II, College Preparatory English, AP Language and Composition, AP Literature and Composition

Description: In this honors, project-based, dual credit course students will select and investigate four topics related to the development of the modern world. Students will consider a historical and global perspective on topics such as gender, liberty, industrialization, and cultural norms/values to develop a better understanding of the world as it is today. The class will utilize primary sources, podcasts, fiction and nonfiction texts, etc. while reflecting and forming opinions supported with logic and evidence. By the end of the course, students will create and present a project related to one of the four concepts they choose to explore in-depth.

Special Notation: *Students will be given the opportunity for voice and choice as they inquire about the world. This brings the expectations that students will manage their time effectively and complete all the necessary reading and writing research assignments.*

Pathways: AC

Competency: Research Writing, Project Based

Introduction to Film

Grade: 9-10

Credit: .5 **Core Course**

Prerequisite: None

Description: In this course students will watch a number of contemporary films, and use those films as subject matter for analysis. Keystone concepts will be reviewed in detail. Film studies terms will also be introduced and used in our film analysis. Students will also make short films.

Pathways: AC

Competency: Project Based

Mass Media

Grade: 10-12

Credit: 1 **Core Course**

Prerequisites: None

Description: This is a combined course in television production and journalism. Students will learn to refine and adapt their writing skills to suit the intended audience as well as develop communication and critical thinking skills in order to produce Paw Print Productions and an online school publication. Requirements include projects such as public service announcements, feature stories, and news stories. Lessons will focus on newspaper writing and video production.

Pathways: AC

Competency: Communications, Digital Literacy

Photojournalism

Grade: 9-12

Credit: 1

Prerequisite: None

Description: Using design software, students will learn to plan and design a yearbook while adapting their writing skills to the yearbook format. Interest in writing, photography, interviewing, publishing, designing, and school activities is essential, as is a willingness to meet deadlines, attend school events, respond to constructive feedback, and work collaboratively with others.

Special Notations: *Enrollment in this course is open to all students in Grades 9-12, but is limited to those who are approved by the instructor/advisor.*

Pathways: AC, BFIT

Competency: Project Based

Public Speaking

Grade: 9-12

Credit: .5 **Core Course**

Prerequisite: None

Description: This nine-week elective will engage students in a number of speaking situations with the goal of building confidence and fluency when speaking in front of large and small groups. The course will also include a focus on speaking and listening etiquette. Students will learn techniques for a variety of speech types, including informative, persuasive, and impromptu. Additionally, students will learn and apply various organizational techniques to their speeches, will analyze the techniques used in famous speeches, and will learn the basics of logic and rhetoric.

Pathways: AC

Competency: Communications

Real World Literature

Grade: 11 or 12

Credit: 0.5 **Core Course**

Prerequisite: Academic English II or Honors English II

Description: This course is designed for students who are **not** planning to earn a four-year degree after high school. Students will explore universal themes and issues by reading both fiction and nonfiction texts. Students will read both whole-class texts and self-selected texts. Class discussions and assessments will center around the analysis of these texts and how they apply to our everyday lives.

Pathways: AC

Competency: Literature

Real World Research

Grade: 11 or 12

Credit: 0.5 **Core Course**

Prerequisite: Academic English II or Honors English II

Description: This course is designed for students who are **not** planning to earn a four-year degree after high school. In this class, students will learn how to evaluate online resources, use civil discourse to discuss current topics, and compose research-based writing. These reading and writing tasks will be shaped around real-life issues relevant to students preparing to leave high school.

Pathways: AC

Competency: Research Writing

Credit: .5 **Elective Course**

Prerequisite: None

Description: In order to gain a full understanding of the theater arts, students need to study all aspects of theatre. In this course, students will have the opportunity to learn how productions evolve both on and off stage. Students will study the history of theater, set design, costuming and makeup, stage presence, memorization, writing scripts, reading published plays and more.

Pathways: AC

Competency: Arts and Humanities

HEALTH AND PHYSICAL EDUCATION

Health & Physical Education 9th and 10th Grade Options:

Teen Health and Physical Education

Grade: 9-10

Credit: .5

Special Notation: This course is required and must be taken in either 9th or 10th grade

Description: Students will gain an understanding of life skills and health and wellness components critical to their well-being and well-being of others. Health topics will include communication and collaboration strategies, mental health, stress-related topics, human sexuality and relationships, disease awareness, prevention and responding to emergencies. Students will also set and monitor health related and life enhancement goals. This course is paired with physical education and will contain both physical activity and classroom components.

Driver's Education / Alcohol, Tobacco, Other Drugs and Physical Education

Grade: 9-10

Credit: .5

Prerequisite: None

Special Notation: This course is required and must be taken in either 9th or 10th grade

Description: Students will learn about obtaining a permit / license, rules of the NHS (National Highway System), defensive driving techniques / driver & passenger safety strategies, privileges and penalties, basic vehicle operation controls, instruments, gauges & warning lights, how to become a responsible driver in all conditions and how to prepare for emergency situations. Students will also learn about alcohol, tobacco and other drugs as a part of the health components of this course. This course is paired with physical education and will contain both physical activity and classroom components.

Health & Physical Education Wellness Competency 11th and 12th Grade Options:

Babysitting and Aquatics

Grade: 9-12

Credit: .5

Prerequisite: None

Notation: This course will count as a PE/health course for grades 11/12

This course will count as an elective course for grades 9/10

Description: The American Red Cross babysitting course in addition to aquatic games fulfills a health and physical education credit. This class will allow students to learn babysitting techniques, complete projects on planning activities, show responsibility, diaper changing, effective communication with children and adults, leadership styles and discipline techniques while babysitting. Upon successful completion of the course and an 80% grade on the American Red Cross final students receive their American Red Cross First Aid and CPR Certification. The Physical Education portion will consist of reviewing the 5 components of fitness followed by participating in water exercise and games that will help them achieve a positive body image as well as muscular endurance, muscular strength and cardiovascular endurance. Students will also understand the benefits of regular physical fitness such as social, psychological and physical benefits. **Special Notation: American Red Cross Babysitting handbook. Students are able to view the babysitting material through an online babysitting handbook. Books are available for purchase at cost from the American Red Cross.**

Pathways: HS, SH

Competency: Communications, Project Based, Wellness

Mental Health and Individual Lifetime Activities

Grade: 11-12

Credit: .5

Prerequisite: None

Description: Mental Health emphasizes the importance of strong mental/emotional health and demonstrates its interrelationship to all other health areas. Students are encouraged to self-evaluate and plan strategies for personal mental health improvement. Personality, Maslow's Hierarchy of Motivation, and Mental Illness will also be researched and discussed. This is paired with Physical Education activities that include Individual and Lifetime Activities.

Pathways: SH

Competency: Wellness

Personal Fitness and Nutrition

Grade: 11-12

Credit: .5

Prerequisite: None

Description: Students will participate in daily moderate to vigorous physical activities and experience their impact on adolescent health improvements. Throughout the course particular attention will be given to the relationship between participation in a regular exercise and nutrition program in regards to stress management, increase in strength and flexibility, disease prevention, and weight management. The student will be exposed to a variety of exercises and activities that provide physical, social, emotional and self-care benefits that can be useful throughout the aging process.

Pathways: SH

Competency: Wellness

Healthy Relationships and Team Sport

Grade: 11-12

Credit: .5

Prerequisite: None

Description: Healthy Relationships studies concentrate on positive communication skills, conflict resolution, decision making, refusal skills, dating, birth control, and prevention of sexually transmitted infections (including HIV/AIDS). This is paired with Physical Education activities that may include Backyard Games, Table Tennis, and/or Speedball. Additionally, time will be spent in the Fitness Center.

Pathways: SH

Competency: Wellness

Health & Physical Education Elective Options

Weight Training

Grade: 9-12

Credit: .5

Prerequisite: None

Reinforces the proper guidelines, principles and techniques of weight lifting, and the development of muscular strength, endurance, power and flexibility at an beginner, intermediate and advanced level. Introduces Olympic lifting techniques. Continues development of individual weight training programs and advanced evaluation techniques.

Classes will be conducted in a large group situation for lectures, warm up, cool down, and core training. With the guidance of the instructor, students will evaluate types of muscular strength and endurance training and implement a weight training and flexibility program for personal needs. Each student will progress at a rate commensurate with their abilities. Pre and post assessment will be conducted for flexibility, body composition, muscular strength, and muscular endurance.

Pathways: SH

Elementary Water Safety

Grade: 10-12

Credit: .5

Prerequisite: Successful completion of Lifeguard Training

Description: This course is designed to allow recently certified lifeguards the opportunity to get the hands on experience of observing and working in an aquatic environment. The students will spend time working in the pool with elementary level students in small groups. They will be educated in the basics of stroke mechanics and safety around aquatic environments. The lifeguards will also be putting their recently learned guarding skills in place by observing elementary water behavior and lifeguarding during the elementary class. This will provide the lifeguard with additional training in a controlled area before the lifeguard is actually placed in the position of head lifeguard. This class will also provide more individualized attention to the elementary students in the swimming classes. Lifeguard certification is a prerequisite for this course. This class will meet for a nine-week period and the student will be granted a .5 credit for successful completion of the course.

Pathways: SH, HS

Lifeguard Training

Grade: 9-12

Credit: .5

Prerequisite: 15 years old

Description: This course will provide training for lifeguarding jobs. Upon successful completion of the course requirements, the American Red Cross will certify the student. This course may be used as an elective or as a .5 health and physical education credit.

Special Notation: Students must pay for certification process and related material—approximate cost \$55.00.

Pathways: SH, HS

Leadership Development

Grade: 9-12

Credit: .5

Prerequisite: None

Description: The curriculum will be task-driven, as students will build leadership and communication skills while working short- and long-term projects. Students will develop both written and verbal communication skills as well as their ability to work constructively in groups. Furthermore, students will examine and expand upon their personal leadership traits by studying texts and models of leadership from literature, business, and film. The course will also include a community service and school improvement focus. This class may be repeated, upon approval of the instructor.

Pathways: AC

Competency: Project Based

LANGUAGES FOR THE 21ST CENTURY

The Big Spring High School program of language studies adheres to the instructional standards of the American Council on the Teaching of Foreign Languages. Through our classroom program we offer a comprehensive, sequenced education in language study, centered on the development of target language skills in Listening Comprehension, Oral Communication Skills, Literacy and Composition. Our emphasis, at all levels of the program, is on the acquisition of fluency: the ability to understand and speak the language. Spanish and French are two of the three principal languages of the American continents, and are the heritage languages of millions of people all over the world.

Big Spring students who show a strong interest in language study have the opportunity to enroll in more than one language at a time, and to complete multiple levels of both French and Spanish.

Information regarding the opportunity to study languages not offered through our classroom program of instruction is available upon request. Online Language courses are an opportunity for students to explore with their counselor.

Exploring World Tourism

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Students will explore pre-travel and cultural and societal topics in order to gain a better respect and understanding for culture as well as how to effectively travel to the countries investigated throughout the course.

Pathways: All

Competency: Research Writing

French I/Spanish I: Introductory Level

Grade: 9-12

Credit: 1

Prerequisite: See Special Notation

Description: **Both Level I programs** introduce the student to simple conversational skills and simple written sentence structures. Units and individual lessons are centered on a set of themes and topics which are naturally interesting to young people: family/friends/school life/sports/shopping/music/and foods. Through the study of target language phonics, alongside the acquisition of the base vocabulary and verb structures, students begin to understand, speak, read, and write in the target language. Culture: French & Spanish speaking regions of the world, famous people, cuisine, sports, and the importance of learning French or Spanish. Students demonstrate developing proficiencies through describing, role-playing, responding to questions about short reading selections, and participating in the creation/presentation of group skits and projects. Quizzes and tests are part of the classroom routine, along with composition work.

Special Notation: A grade of "C" or higher in most recent English class is recommended for entry into the language studies program.

Pathways: All

Competency: Communications, Digital Literacy (French I only)

French II/Spanish II: Novice Level**Grade: 9-12**

Credit: 1

Prerequisite: French I/Spanish I

Description: Level II continues the development of a student's capabilities in the four principal skill sets: listening, speaking, reading, and writing. There is more emphasis in Level II on building the skills to form increasingly correct, complex sentence structure, and on adding the concepts of communication that describe events in the past and future verb tenses. Instruction is thematically based and centers on topics of travel, tourism, art history, school system comparisons, restaurant settings, regional customs and more food!

Culture: The geography and history of various travel destinations. *Art:* French: famous monuments throughout the country. Spanish: Velázquez, Goya, Picasso, and more!

Special Notation: A grade of "C" or higher in Level I is recommended for advancement to Level II.

Pathways: All

Competency: Communications, Digital Literacy (French II only)

French III/Spanish III: Intermediate Level**Grade: 10-12**

Credit: 1

Prerequisite: French II/Spanish II

Description: Level III is the gateway to language fluency. Students learn to speak, read, and write with increasing accuracy and confidence. Units of study continue to be thematically based and students are guided to draw on the wealth of vocabulary and language structures they've accumulated since their introduction to the language in Level I. *Culture:* Spanish III students will explore different types of literature. *Art:* French III Prehistoric through modern-day art and artists.

Special Notation: A grade of "C" or higher in Level II is strongly recommended for advancement to Level III.

Pathways: All

Competency: Communications, Digital Literacy (French III only), Global Studies

Hispanic Pop Culture**Grade: 9-12**

Credit: .5

Prerequisite: Spanish I

Description: Students will expand their understanding of other cultures by exploring Latin American and Spanish pop culture topics including television, movies, music, and sports and leisure through authentic materials and resources. For this course, students must have completed Spanish I.

Pathways: All

Competency: Global Studies

Honors French IV/Honors Spanish IV**Grade: 10-12**Credit: 1 **Core Course**

Prerequisite: Spanish III/French III

Description: The Honors Level language courses are designed to advance students more swiftly, and with greater challenge, toward language fluency in all skills areas. Level IV students are expected to willingly use the target language in the classroom, with classmates, as well as with their teacher. The thematic focus of Level IV promotes an almost exclusive use of the classroom language; with target language to read, discuss, and write about the cultural history, physical geography, and daily lives of people who live in French and Spanish speaking regions of the world. The Level IV course comprises a comprehensive overview of grammar and a seminar style approach to reading material discussion. *Culture:* In-depth study of Spanish Art & Artists.

Special Notation: A grade of "B" or higher in Level III is strongly recommended for advancement to Honors Level IV.

Pathways: All

Competency: Arts and Humanities, Communications, Digital Literacy (Honors French IV Only), Global Studies (Honors Spanish IV Only)

Credit: 1 **Core Course**

Prerequisite: Spanish IV/French IV

Description: Honors Spanish V and Honors French V are designed to increase proficiency in listening and understanding, speaking, reading, and writing. All vocabulary and grammar are acquired, reviewed, or mastered through the study of literature, history, and culture. Attention is given to developing conversational speaking and writing skills.

Special Notation: A grade of "B" or higher in Level IV is strongly recommended to advance to Level V.

Pathways: All

Competency: Arts and Humanities, Communications, Digital Literacy (Honors French V only)

MATHEMATICS

Algebra I

Grade: All

Credit: 1

Prerequisite: None

Description: Algebra I serves as the foundation for all higher level mathematics courses. Students will develop a fundamental understanding of equations, inequalities, linear functions, and polynomials. Emphasis is placed on the thinking process, organizational skills, and the understanding of concepts through problem solving.

Pathways: All

Algebra II

Grade: All

Credit: 1 **Core Course**

Prerequisite: Geometry

Description: This course extends the topics seen in Algebra I and Geometry. A review of linear algebra will be followed by an introduction to the complex number system, radicals, multivariable systems, and solving/ graphing nonlinear functions. Throughout this course, students will develop critical thinking skills, and problem solving techniques to prepare for future math courses and college entrance exams.

Pathways: All

Competency: Numerical Analysis

AP Calculus AB

Grade: All

Credit: 1 **Core Course**

Prerequisites: "B" average or higher in Honors Precalculus and Honors Trigonometry

Description: AP Calculus is designed for students who have exhibited strong mathematical and problem-solving skills, particularly those with an interest in pursuing a college degree in a math-heavy field such as physics, engineering or the actuarial sciences. Calculus is the study of how functions change and accumulate. Calculus builds on, and formalizes the concepts learned in Precalculus and Trigonometry. Strong algebra skills provide the solid foundation needed for success in Calculus.

Special Notations: The course frequently uses the TI-84 graphing calculator to study the connections between the graphical, numeric and analytic representation of a function. Students with other graphing calculators may need to work independently in order to find how their particular graphing calculator does whatever was shown on the TI-84.

Pathways: All

Competency: Numerical Analysis

AP Calculus BC

Grade: All

Credit: 1 **Core Course**

Prerequisites: Calculus AB

AP Calculus BC is a continuation of AP Calculus AB. Throughout the BC course, a thorough review of AB topics will lead to the fourth 'Big Idea' of AP Calculus - Sequence and Series. An in-depth study of various types of series along with methods for determining convergence and divergence will lead to an examination of approximating known functions using Maclaurin and Taylor series. The concept of approximation is a common theme throughout AP Calculus, and the power series provides a unifying, comprehensive conclusion to AP Calculus. The AP Calculus BC exam is composed of both calculator-required problems and calculator-restricted problems. As such, all students taking AP Calculus BC are required to have access to a graphing calculator. The course will be taught using a TI-84 graphing calculator.

Special Notations: *It is recommended that students enrolled in AP courses take the AP Exam. Students who score a 3, 4, or 5 on the AP Calculus BC Exam may receive college credit for Calculus I and Calculus II or be placed directly into Calculus III by their respective college or university. Students should check with their prospective college for placement policy.*

Pathways: All

Competency: Numerical Analysis

AP Statistics

Grade: All

Credit: 1 **Core Course**

Prerequisite: Algebra II

Description: Exploring data, planning a statistical study, probability, and inferential reasoning are the four main components of this course. It is designed to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students taking this course will take the AP Statistics exam and possibly receive college credit for an introductory non-calculus based statistics course.

Special Notations: *Recommended "B" average or higher in prerequisite course(s). It is recommended that students enrolled in AP courses take the AP Exam. It is strongly recommended that students provide their own TI-84 CE graphing calculator, or equivalent, for AP Statistics. It will be used extensively throughout the course and is required for the AP Statistics exam.*

Pathways: All

Competency: Numerical Analysis

Geometry

Grade: All

Credit: 1 **Core Course**

Prerequisite: Algebra I

Description: Plane Geometry investigates lines, angles, triangles, quadrilaterals, polygons, and circles. Algebra and geometry are integrated to examine concepts of measurement, congruence, similarity, and logical reasoning.

Special Notation: *It is recommended that students have their own scientific calculator.*

Pathways: All

Competency: Numerical Analysis

Honors Algebra II

Grade: All

Credit: 1 **Core Course**

Prerequisites: Geometry

Honors Algebra II is a rigorous and fast-paced class designed for highly motivated and capable math students. This course is designed to provide the students with math skills that are essential for continuing into advanced mathematics on the secondary level as well as mathematics at the college level. The curriculum is based on the state's established core content standards for Algebra II. Upon successful completion of this course, students will be prepared for honors pre-calculus. A TI-84 calculator is recommended. Review work is required prior to the course.

Special Notation: "B" average or higher in Geometry is recommended.

Pathways: All

Competency: Numerical Analysis

Honors Geometry

Grade: All

Credit: 1 **Core Course**

Prerequisite: Algebra I

Description: Honors Plane Geometry investigates angles, triangles, quadrilaterals, polygons, circles and basic trigonometry at a more rigorous pace than Geometry. Algebra and geometry are integrated to examine concepts of measurement, congruence, similarity, and logical reasoning. Students will be expected to complete proofs with proper mathematical notation throughout the course. The primary objective of this course is to teach students how to reason mathematically through visualization, analysis and deductive reasoning. Review work is required prior to the course.

Special Notations: "B" average or higher in Algebra I is recommended. It is also recommended that students have their own scientific calculator.

Pathways: All

Competency: Numerical Analysis

Honors Precalculus

Grade: All

Credit: 1 **Core Course**

Prerequisites: "B" or higher in Honors Algebra II is recommended

Description: This course seeks to prepare students for success in high-level math courses through the extended use of critical thinking, analysis, and procedural mastery. Concepts covered will include a survey of common functions and their graphs, limits of functions, and an introduction to conic sections. Review work is required prior to the course.

Pathways: All

Competency: Numerical Analysis

Honors Trigonometry

Grade: All

Credit: 1 **Core Course**

Prerequisites: "B" or higher in Honors Algebra II or Algebra II is recommended

Description: This course seeks to fully prepare the student for success in higher-level math courses through the extended use of critical thinking, analysis, and procedural mastery. Concepts covered will include right triangle relationships, the use of trigonometry in modeling periodic behavior, graphing trigonometric functions, trigonometric identities, and solving trigonometric equations. If time permits, further extension and application of trigonometry will explore topics such as vectors, polar coordinates, and parametric equations. Successful completion of a review/preview preparatory packet is required.

Special Notation: As this is a numerically intensive course, with frequent connections sought between numerical and graphical solutions, the purchase of a TI-84 calculator is strongly recommended.

Pathways: All

Competency: Numerical Analysis

Mathematical Modeling

Grade: All

Credit: 1 **Core Course**

Prerequisite: Geometry

Description: Mathematical Modeling is the process of understanding real-life phenomenon by determining the mathematics that underlies the data. Beginning with whole class investigations into applications from studies such as biology, chemistry, and physics, students will be taught the use of the Vernier Logger-Pro data collection interface. Students will continue to build on these skills with labs appropriate to their mathematics background before designing and implementing a final Mathematical Modeling project of their choosing. The final project will include a presentation before an authentic audience.

Pathways: All

Competency: Numerical Analysis, Project Based

Precalculus

Grade: All

Credit: 1 **Core Course**

Prerequisite: Algebra II

Description: This course continues an exploration into algebraic functions. Students will use critical thinking, analysis, and procedural mastery to investigate properties of functions, rational functions, exponential and logarithmic functions, along with an introduction to sequences and series.

Pathways: All

Competency: Numerical Analysis

Statistics

Grade: All

Credit: 1 **Core Course**

Prerequisite: Geometry

Description: The purpose of Statistics is to allow students the opportunity to explore the data and statistics behind each students' own interest. Students will get an introduction to statistics and then further discover how numbers drive the things that they enjoy through individual topic information gathering and projects. Topics that have been explored in the past include: sports, the medical field, entertainment (TV, movies, music, and video games), clothing, nature, food, areas of employment and others. Students will design and implement a final statistical project of their choosing. The final project will include a presentation before an authentic audience.

Pathways: All

Competency: Numerical Analysis, Project Based

Computer Science Courses

Computer Science Principles

Grade: All

Credit: 1 **Core Course**

Prerequisite: None

Description: How does technology impact and transform your world? This course introduces you to the foundational concepts of computer science and challenges you to explore areas such as webpage (create your own!), programming, and data privacy, encoding, encrypting and storage. In doing so, you will use technology to address real-world problems and build relative solutions. No experience in web design or programming is needed.

Pathways: All

Competency: Project Based, Digital Literacy

Computer Science with Python

Grade: All

Credit: 1 **Core Course**

Prerequisite: Algebra 1

Description: This course is designed to help students develop their skills in the planning, logical, and programming arenas. The goal is for students to have a solid foundation in programming and some of the logic behind it. The course begins with an introduction to computers and hardware. The subsequent units blend the mathematics behind programming with application in Python programming language.

Pathways: All

Competency: Project Based, Digital Literacy

Graphics with Python

Grade: All

Credit: 1 **Core Course**

Prerequisite: None

Description: Students will learn to create graphics using the Python programming language. No experience with programming is needed.

Pathways: All

Competency: Project Based

Java

Grade: All

Credit: .5 **Core Course**

Prerequisite: None

Description: Learn to program computers using the Java programming language! Java is an excellent language to start coding because many of its structures such as branching, looping and graphics transfer to other programming languages. No experience with programming is needed to learn Java.

Pathways: All

Competency: Project Based

MUSIC

AP Music Theory

Grade: 10-12

Credit: 1 **Core Course AC Pathway Only**

Prerequisite: Approval of Music Theory Teacher is recommended

Description: The AP Music Theory course enables highly motivated students to engage in college level work in the areas of reading and analyzing notated music and aural training. The ultimate goal of the AP Music Theory course is to develop a student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. The achievement of this goal may be best promoted by integrated approaches to the student's development of aural, sight-singing, written, compositional, and analytical skills. The work of the course will emphasize preparation for the advanced placement music theory examination in May.

Special Notations: Completion of Music Theory I with approval from Music Theory instructor. It is recommended that students enrolled in AP courses take the AP Exam. AP Music Theory is weighted .5 for cumulative GPA calculation.

Pathways: AC

Competency: Arts and Humanities

Concert Band

Grade: 9-12

Credit: 1

Prerequisite: Recommendation of MS or HS Band Director

Description: Concert Band is a full-year, performance-based course that includes all members of the instrumental program, grades 9 through 12. The ensemble is designed to teach the basic and advanced fundamentals of wind and percussion playing. Ensemble and solo activities are designed to develop elements of musicianship including, but not limited to: tone production, technical skills, intonation, music reading skills, listening skills, analyzing music, and studying historically significant styles of literature. The Concert Band typically performs 3-5 concerts per year, in addition to festivals and workshops held around the region during the school day.

Pathways: AC

Competency: Arts and Humanities

Concert Choir

Grade: 9-12

Credit: 1

Prerequisite: Recommendation of MS or HS Chorus Director

Description: Concert Choir is a full-year, performance-based course. Audition is required to place members in the correct vocal section. A wide variety of songs and styles are covered including a cappella pieces. Sight-reading is emphasized. Choral techniques including tonal quality, diction, phrasing, rhythm, and musicality are stressed. The choir performs in 3-5 concerts each year and occasionally travels to present a concert. Choir members have the opportunity to participate in County Chorus and audition for the District 7 Chorus Festival.

Pathways: AC

Competency: Arts and Humanities

Guitar Lab

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Guitar Lab is designed for students at all levels of guitar playing, from novice on up. Students will receive guidance in playing guitar based on ability. Concepts covered will include note reading, tab reading, basic guitar mechanics/maintenance, and chord reading. Students will have a big opportunity to select music and styles that interests them with instructor recommendation. All students will perform a final recital as part of this course.

Special Notation: A course fee of \$20.00 will be charged for student method books and guitar maintenance.

Pathways: AC

Competency: Arts and Humanities

Intro to Music Theory

Grade: 9-12

Credit: 1

Prerequisite: Approval from Band/Choir director

Description: Intro to Music Theory is designed for students interested in learning about the fundamental elements of music. This course will cover the properties of music, rules of music notation, rhythm and meter, note identification, clefs, scales, modes, key signatures, triads, and seventh chords. Aural skills will be developed and introduced through singing, dictation, improvisation, and interval/chord identification.

Special Notation: Students should be fluent in at least one clef (treble or bass).

Pathways: AC

Competency: Arts and Humanities

Jazz Studies

Grade: 9-12

Credit: .5

Prerequisite: None

Description: This course will trace the development of Jazz music from its origins to present day. Students will explore the different eras, styles, artists, literature and social issues associated with Jazz music. The class will include audio and video recordings to illustrate the stylistic differences and development of each era. Students will spend extensive amounts of time on self-directed research projects that will combine both music and social studies concepts involving the various eras of jazz. This course is co-taught by both the Music and Social Studies departments.

Pathways: AC

Competency: Arts and Humanities

Lighting and Sound Design

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Lighting and Sound Design is a course for students interested in the technical side of musical theatre. Students will learn about modern lighting and sound equipment, including but not limited to light consoles, dimmer racks, lighting fixtures, color theory, sound boards, wiring, and microphone selection. In addition students will learn basic stage direction techniques and terminology.. Students will use learned skills to develop a final product of designing the lighting and sound for an act of a musical.

Pathways: AC

Music History

Grade: 9-12

Credit: .5

Prerequisite: None

Description: This course will trace the development of music, covering the major periods, including the Renaissance, Baroque, Classical, Romantic, and Modern eras. A study of the major composers and the major works within each period in the evolution of music will be the focus of this class. Students will develop formal research skills as well as musical analysis.

Pathways: AC

Competency: Arts and Humanities, Global Studies

Music in Film

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Music in Film explores the purpose and history of music in association with the motion picture industry. The material will include early Black & White “silent” films through films presented in theatres today that use original scores and classical masterpieces to evoke emotion. Students will score and produce music for a film of their creation, learn about the use of music in character identification, synchronizing techniques, and the dubbing process for sound effects.

Pathways: AC

Competency: Arts and Humanities

Music Technology Lab 1

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Music Technology Lab 1 builds understanding of fundamental concepts involved with recording, processing, editing, and performing music. Participants will learn fundamental properties of sound, how to setup and troubleshoot basic audio equipment, how to compose music with loops, how to write music in digital notation programs, how to evaluate the effect of a room’s acoustics, and how to edit and adjust live sound. The course will culminate in a final project where students write, produce, and perform their own music in different venues.

Pathways: AC

Competency: Project Based

Music Technology Lab 2

Grade: 9-12

Credit: .5

Prerequisite: Music Tech Lab 1

Description: Music Technology Lab 2 builds on knowledge obtained in Tech Lab 1, with more in-depth exploration of sound and editing with Audacity Soundnation, and other tools readily available to students. Projects include creating voice overs, foley art, podcasting, and the mastering of recorded audio from various live performances throughout the high school music department.

Pathways: AC

Competency: Project Based

Piano Lab

Grade: 9-12

Credit: .5

Prerequisite: None

Description: Piano Lab is designed for students at all levels of piano playing, from the novice on up. Students will receive a crash course in fundamentals and then receive individualized lessons based on ability. Concepts include note reading, lead sheet reading, rhythmic reading, elements of piano technique, scales, arpeggios, block chords, classical songs, and basic music theory.

Special Notation: A course fee of \$20.00 will be charged for student method books and keyboard maintenance.

Pathways: AC

Competency: Arts and Humanities

Credit: .5

Prerequisite: None

Description: Voice Lab is designed for students who would like to develop their individual voice. Students will be able to choose repertoire, with instructor recommendation, to develop their individual singing ability. The course will cover vocal ranges, diction, voice quality, and will use varying repertoire throughout, as well as basic music theory principles such as note and rhythm reading. All students will perform a final recital as part of this course.

Pathways: AC

Competency: Arts and Humanities

Extra-Curricular Offerings in Music

A Cappella Ensemble

Vocal Ensemble that is open to interested students involved in curricular Concert Choir. Membership is limited by audition.

Cantabile

Vocal ensemble that is open to interested students involved in curricular Concert Choir. Membership is limited by audition.

Chamber Ensembles

Open to members of the Concert Band and/or Marching Band. Students not enrolled in these ensembles will be considered on a case-by-case basis and must get permission from the band director. These are primarily student-led ensembles with instructor supervision.

Color Guard

Color guard members are expected to perform in both marching band and indoor. Students who only wish to participate in one season per year will be considered on a case by case basis.

Gold, Silk, & Satin Lab Band

Open to members in Concert Band and/or Marching Band and is dependent on required instrumentation of the ensembles. This ensemble only runs when there are enough students to support two jazz bands.

Marching Band

Participation is open to all band members. Interested students not in the band are considered on a case-by-case basis and must get permission from the band director.

Musical

Participation is open to all students. Auditions are required due to casting requirements.

Percussion Ensemble

Open to members of the Concert Band and/or Marching Band. Students not enrolled in these ensembles will be considered on a case-by-case basis and must get permission from the band director.

Pit Band

Open to members of the Concert Band and/or Marching Band. Students not enrolled in these ensembles will be considered on a case-by-case basis and must get permission from the band director.

Twilight Jazz Ensemble

Open to members in Concert Band and/or Marching Band and is dependent on required instrumentation of the ensembles.

SCIENCE

Anatomy and Physiology

Grade: 11-12

Credit: 1 **Core Course**

Prerequisites: Biology and Chemistry

Description: The anatomy and physiology course is an introduction to the specialized terms, basic concepts and principles which lead to an understanding of the human body and how it functions correctly. Units included in the Anatomy and Physiology course may include: Introduction to terminology, biochemistry, cells, tissues, skin and the systems of the body.

Special Notations: \$10 Lab Fee

Pathways: SH

Competency: Lab Science

AP Biology

Grade: 11-12

Credit: 1 **Core Course**

Prerequisites: Biology and Chemistry

Description: This course is the equivalent of a college introductory biology course. Topics include molecules and cells, heredity and evolution, and organisms and populations. The emphasis will be a hands-on, experimental approach.

Special Notations: It is recommended Biology and Chemistry final averages be 85 percent and above. It is also recommended that students enrolled in AP courses take the AP Exam. AP Biology is weighted .5 for cumulative GPA calculation. \$10 Lab fee.

Pathways: SH

Competency: Lab Science

AP Chemistry

Grade: 11-12

Credit: 1 **Core Course**

Prerequisites: Successful completion of Algebra II and Chemistry

Description: This course is taught from a college textbook and includes topics found in a first year college chemistry course. It is assumed that students have basic chemistry knowledge. Topics from Chemistry I will be discussed in detail and additional topics such as nuclear and organic chemistry, kinetics, equilibrium, and thermodynamics will be introduced. Emphasis is placed on solving a variety of math problems relating to chemistry. Considerable lab work is required.

Special Notations: This course is offered once a year. It is recommended that students enrolled in AP courses take the AP Exam. AP Chemistry is weighted .5 for cumulative GPA calculation. \$10 lab fee.

Pathways: SH

Competency: Lab Science

AP Environmental Science

Grade: 10-12

Credit: 1 **Core Course**

Prerequisites: Algebra and Biology

Description: Do you like to learn about the environment? Have you been wondering if you could survive taking an AP science course? AP Environmental Science is deemed to be the stepping stone class between science courses and other AP science courses. Students will study environmental issues dealing with pollution, biodiversity, population, ecology, renewable and non-renewable energy, human health, and much more. Students are required to complete a summer/fall assignment prior to the start of class. If you are not sure if this class is the class for you, stop down and talk to Mrs. Fulton to find out more information.

Special Notations: It is recommended that students enrolled in AP courses take the AP Exam. AP Environmental Science is weighted .5 for cumulative GPA calculation. \$10 lab fee.

Pathways: SH

Competency: Lab Science

AP Physics C—Mechanics

Grade: 11-12

Credit: 1 **Core Course**

Prerequisite: Honors Physics I (Suggested: Calculus)

Description: The course is designed to be similar to a calculus based physics class taught at the college level. Students majoring in the sciences, mathematics, and engineering usually take this course. The course is more intensive and analytical than the regular physics course. Emphasis is placed on solving a variety of challenging problems, some requiring calculus. The subject matter of the course is a rigorous treatment of kinematics, dynamics, and other topics in mechanics.

Special Notations: *It is recommended that students enrolled in AP courses take the AP Exam. AP Physics C- Mechanics is weighted .5 for cumulative GPA calculation. \$10 lab fee.*

Pathways: SH

Competency: Numerical Analysis, Lab Science

Astronomy

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: Biology

Description: This class focuses on the processes and the application of theories involved in studying space. Units covered during the course include: Life in the Universe, the Solar System, Planet Earth, Mars, constellations, stars, severe storms and forecasting.

Pathways: SH

Competency: Lab Science

Biochemistry

Grade: 11-12

Credit: .5

Prerequisite: Successful completion of Biology and Honors Chemistry. Completion of AP Biology is strongly recommended

Description: Biochemistry is a course that goes beyond the “what is happening” that was introduced in Biology and begins to answer the question “why is it happening”. Topics to be covered may include: basic organic chemistry, pH and equilibrium, amino acids and peptides, structure of proteins, behavior of proteins, nucleic acids, transcription of the genetic code, electron transfer in metabolism, carbohydrates, glycolysis, citric acid cycle, and photosynthesis.

Pathways: SH

Competency: Lab Science

Biology

Grade: 9

Credit: 1

Description: The emphasis for this biology course is the study of living things and their relationships with each other as well as their environment. This course will be covering the biology Keystone state standards. Units include: Characteristics of living things, biochemistry, cell transport, bioenergetics, cell cycle, DNA technologies, protein synthesis, genetics and evolution.

Pathways: SH

Biotechnology

Grade 10-12

Credit: 1 **Core Course**

Prerequisite: Biology

Description: This course provides an introduction to biotechnology and its application in a variety of medical, industrial, and agricultural disciplines. Topics covered include drug development, medical treatments, environmental biotechnology, biotechnology in animal breeding and horticulture, and ethical issues in biotechnology. This course emphasizes basic understanding of the techniques used in all areas of biotechnology, and the range of consumer products and employment available. This course is well suited to students interested in all areas of science and includes an introduction to laboratory procedures universal to all biotech labs.

Special Notations: \$10 Lab fee

Pathways: SH

Competency: Lab Science

Chemistry

Grade: 10-12

Credit: 1 **Core Course**

Prerequisites: Successful completion of Algebra I and Biology

Description: This course focuses on the study of matter; its composition, properties, and structures; and the changes that matter undergoes. Specific topics also include chemical names and formulas, chemical equations, phases of matter, bonding, types of chemical reactions, solutions, and acid/base chemistry. Considerable lab work is required in this course.

Pathways: SH

Competency: Lab Science

Environmental Science

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: None

Description: This course examines the interactions between organisms and their environment and the relationship between ecological processes and patterns of distribution and abundance of organisms. This course is designed to give students an introductory understanding of how ecological systems and ecological principles apply to natural ecosystems and the human interface with those systems. It will include topics such as global biogeochemical cycles, the hydrologic cycle, and the carbon cycle; trophic levels in ecosystems; competition, predation, parasitism, and mutualism; population dynamics, agriculture, forestry and biodiversity. Laboratory/field sessions emphasize ecological principles and techniques.

Pathways: SH

Honors Chemistry

Grade: 10-12

Credit: 1 **Core Course**

Prerequisites: Successful completion of Algebra I and Biology

Description: This course focuses on the study of matter and its composition, properties, and structures as well as the changes that matter undergoes. Specific topics also include chemical names and formulas, chemical equations, phases of matter, bonding, types of chemical reactions, solutions, and acid/base chemistry. Special emphasis will be placed on the mathematics involved in chemistry. Considerable lab work is required in this course. This course is recommended for students planning on attending college.

Pathways: SH

Competency: Lab Science

Honors Physics I

Grade: 10-12

Credit: 1 Core Course

Prerequisite: Algebra I (Suggested: Chemistry)

Description: This science deals with the interaction between matter and energy. It will include a study of motion and forces, energy, wave motion, and electric fields. Various laboratory exercises will be included to develop an appreciation of how the scientist works, as well as what scientists have discovered. Problem solving is stressed.

Pathways: SH

Competency: Numerical Analysis, Lab Science

Honors Physics II

Grade: 11-12

Credit: 1 **Core Course**

Prerequisites: Chemistry and Honors Physics I

Description: This eighteen week course will serve as an introduction to nuclear physics, optics, and sound. Problem solving and nuclear theory will be stressed as well as the impact of nuclear science on society. Discussion of waves and wave phenomena, and application of these theories will be stressed. Topics discussed will include: relativity, spectra analysis, atomic and nuclear models, fission, fusion, radioactivity, optics, sound wave motion, and energy transfer.

Special Notation: \$10.00 Lab fee

Pathways: SH

Competency: Numerical Analysis, Lab Science

Introduction to Forensics

Grade: 11-12

Credit: .5 **Core Course**

Prerequisites: Successful completion of Biology and Chemistry/Honors Chemistry

Description: This course will explore the aspects of science which relate to forensics. The course will also feature careers available in this fascinating field of study. Topics may include: crime scene processing, collection of evidence, visualizing, lifting and rolling fingerprints, fingerprint analysis, footwear and tire impressions, fiber analysis, glass analysis, hair analysis, drug testing and analysis, DNA analysis, testing of body fluids and blood stain pattern analysis.

Special Notation: \$10 Lab fee

Pathways: SH

Competency: Lab Science

Medical Terminology

Grade: 11-12

Credit: .5

Prerequisite: None

Description: This course is a systematic approach to developing the extensive medical vocabulary used in health care occupations. Through a study of root words, prefixes and suffixes, the course will provide the ability to identify, build and recognize terminology used to describe the human body as well as pathological processes, procedures, conditions and diseases that may affect it. This is a beginner level course for students interested in the healthcare or medical fields. No previous knowledge of these topics is necessary.

Pathways: HS, SH

Competency: Research Writing

Meteorology

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: Biology

Description: This class focuses on the processes and the application of theories involved in weather on planet Earth. Units covered during the course include: atmospheric chemistry and atmospheric physics, with a major focus on weather forecasting.

Pathways: SH

Competency: Lab Science

Microbiology

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: Biology

Description: This course will introduce microorganisms and how they affect our lives in both helpful and harmful ways. Topics include: Introduction to microbiology, microscopy, preparation of specimens, microbial growth, microbial genetics, bacteria, viruses, important eukaryotes and infectious diseases.

Special Notation: \$10 Lab fee

Pathways: SH

Competency: Lab Science

Oceanography

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: Biology

Description: This course focuses on the physical and biological properties of Earth's marine environments. Topics include coastal ecology, pollution, currents and tides, navigation, maritime history, seafloor geology, life zone studies, identification of marine organisms and their characteristics. Use of the Internet and data collection equipment will be utilized extensively during this course.

Pathways: SH

Research Seminar

Grade: 11-12 (Others by Recommendation)

Credit: 1 **Core Course SH Pathway Only**

Prerequisites: Biology and Chemistry

Description: Research Seminar is a course for students who are interested in developing their own research project in any of the Sciences or Social Sciences. The goal of this course is to prepare students for college admission and the Capital Area Science and Engineering Fair that happens in the spring. Students will be able to select a topic of their choice, get help in turning it into a research study, perform the study and then create professional ways to present the information. The goal is for students to focus on making a difference in their community.

Pathways: SH

Competency: Lab Science, Project Based

Sports Medicine

Grade: 11-12

Credit: .5

Prerequisite: Biology

Description: The course provides an overview of the role of a certified athletic trainer in the high school or clinical setting. Students will be instructed in the basics of anatomy, physiology, and kinesiology as they relate to athletic injuries. Students will engage in many hands on activities and practices that will prepare the students for a future career as an athletic trainer. Techniques and skills will be taught including taping, wrapping, rehabilitation and treatment modalities along with basic first aid.

Special Notation: Students may need to purchase materials or be responsible for paying a lab fee not in excess of \$20.00.

Pathway: SH

SOCIAL STUDIES

American Studies

Grade: 9

Credit: 1

Prerequisite: None

Description: This core course involves the study of American history and culture (circa 1890-present) through units including but not limited to the following themes: discrimination, war and change, technological developments, economic transformation and globalization, cultural diversity, and international diplomacy. Primary source texts will be utilized, requiring students to learn and practice effective historical thinking and analysis skills to interpret text, then utilizing their knowledge to research and examine how political, social, economic, and cultural changes and conflicts had an impact on the United States during this period. Comparisons between past historical events and contemporary America will be examined. Students will be required to successfully demonstrate their learning through written assignments and assessments including a culminating oral history project. Throughout the course, students will develop a greater understanding of the rights and responsibilities of American citizenship.

Pathways: All

AP Government and Politics

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: See Special Notation

Description: This course provides an analytical perspective on government and politics in the United States through the study of general concepts used to interpret US politics and analysis of specific examples. It requires familiarity with various institutions, groups, beliefs and ideas that constitute US politics: Our Government's Constitutional underpinnings, our cultural beliefs and behaviors regarding politics, political parties/interest groups/mass media, governmental institutions and policy, civil rights and civil liberties. Students are to take the AP exam associated with this course; successful completion of which may result in college credit or advanced placement or both.

Special Notation: Teacher recommendation is suggested.

Pathways: All

AP Psychology

Grade: 11-12

Credit: 1 **Core Course**

Prerequisite: See Special Notation

Description: The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice. The course ultimately focuses on preparing the student for success on the AP Exam.

Special Notation: It is highly suggested that students have previous experiences in other Honors or AP coursework.

Pathways: BFIT, HS, SH

AP US History

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: See Special Notation

Description: AP U.S. History is a challenging college level course that is taken nationwide in preparation for the Advanced Placement test in May. Students who are successful on the AP test will earn college credit. Exceptional reading and writing skills, as well as willingness to devote considerable time to homework and study are necessary for success. This course is designed to enhance skills in assessing historical materials, interpreting problems and weighing evidence in order to write persuasive and credible essays.

Special Notation: Previous AP Courses or a teacher recommendation are highly suggested.

Pathways: All

AP World History - Modern**Grade: 11-12**Credit: 1 **Core Course**

Prerequisite: See Special Notations

Description: AP World History is taught at a first-year college level and requires students to read, write, discuss, and analyze at an advanced level. The course will prepare students to take the AP examination with the possibility of earning college credit. Course content is structured around the investigation of five course themes and 19 key concepts in six different chronological periods, from approximately 8000 B.C.E. to the present (College Board). Additionally, students will develop proficiency in various historical thinking skills, through the use of primary and secondary source materials. Our studies will be supplemented with cultural and artistic learning opportunities.

Special Notation: Honors Government or teacher recommendation are suggested.

Pathways: All

Competency: Global Studies

Civil Discourse in an Election Year: Dickinson College**Grade:****11-12**

Credit: 1 (+College Credit)

Description: This course is offered by Dickinson College, in coordination with the Big Spring and Carlisle Area school districts. This class will be a deep dive into the issues, trends, campaign tactics and strategies, and the entirety of the political process of the presidential election of 2020. These topics will be explored through the lens of civil discourse, and how to have meaningful dialogues between individuals and groups who hold strong and passionate beliefs. This course will be taught by a Dickinson College faculty member and will be held at Carlisle Area High School. Students who successfully complete the course will be awarded college credits.

Pathways: All

Current Events**Grade: 9-12**Credit: .5 **Core Course**

Prerequisite: None

Description: This course will focus on national and international events of social, political, economic, geographic and cultural importance. Students will study an array of events that are currently impacting the U.S. and the world. Class work will emphasize reading, researching, writing, and discussion to understand how recent events may be reshaping our history and impacting our lives.

Pathways: All

Competency: Communications

Design Thinking 101**Grade: 9-12**Credit: .5 **Core Course**

Prerequisite: None

Description: Students will experience the design process of Empathy, Define, Ideate, Prototype, and Test to develop ideas that meet the needs of humans. Students will be interviewing and observing people in their natural setting, then identifying an area for improvement. They will consider as many ways as possible to approach the area of need and will work to develop one of those ideas. This class teaches strategies to create critically. It also improves communication and collaboration skills and inherently involves a significant amount of hands-on group work.

Pathways: HS, SH

Competency: Project Based, Digital Literacy

Economics

Grade: 9-12

Credit: .5 **Core Course**

Prerequisite: None

Description: This is a recommended course for students enrolled in the Business Pathway. This course is designed to give students an understanding of our economic system. The areas of emphasis include the concepts of competition, supply and demand, inflation and deflation. The role of the consumer is emphasized. The course includes practical application by analyzing business decisions and investing, and comparison of economic goals and systems and investing.

Pathways: All

Competency: Digital Literacy

Geography

Grade: 9-12

Credit: .5 **Core Course**

Prerequisite: None

Description: Students will be developing spatial awareness by analyzing maps, charts, and graphs to understand the interaction between humans and their environment. An analysis of how the earth naturally functions is followed by what it takes for human society to function, including infrastructure and use of resources. The two are then connected and a careful consideration of how humans impact the planet and how this can be improved.

Pathways: All

Competency: Digital Literacy, Global Studies

Government

Grade: 10

Credit: 1 **Core Course**

Description: In this core course, students will explore the origins of American government, its organization and functionality, and the degree to which American government is involved in economic, religious, and social issues and reforms. Emphasis will be placed on the relationship between government and economic issues. Examination of the federal, state, and local levels of government will be conducted throughout the course. Each unit will allow the student to research and analyze the various components of government. Several student-driven substantial projects will be successfully completed in support of the curriculum.

Pathways: All

Honors English / Honors World Studies

Grade 11-12

Credit: 2 **Core Courses**

Prerequisite: College Preparatory English, AP Language and Composition, AP Literature and Composition

Description: In this honors, project-based, dual credit course students will select and investigate four topics related to the development of the modern world. Students will consider a historical and global perspective on topics such as gender, liberty, industrialization, and cultural norms/values to develop a better understanding of the world as it is today. The class will utilize primary sources, podcasts, fiction and nonfiction texts, etc. while reflecting and forming opinions supported with logic and evidence. By the end of the course, students will create and present a project related to one of the four concepts they choose to explore in-depth.

Special Notation: Students will be given the opportunity for voice and choice as they inquire about the world. This brings the expectations that students will manage their time effectively and complete all the necessary reading and writing research assignments.

Pathways: AC

Competency: Research Writing, Project Based, Global Studies

Honors Government

Grade: 10

Credit: 1 **Core Course**

Prerequisite: None

Description: In this honors level course, students will study the same topics as the academic-level Government course, but with an increased emphasis on the ideological and intellectual influences behind the development of American government, the creation and reform of laws, structure and function of political parties, and the impact of special interest groups and the media on governmental operations. Students will have an opportunity to develop personalized projects in areas of public policy that relate to current, real-world issues. Honors students are expected to successfully demonstrate their learning through a variety of written and verbally executed tasks. This course will also prepare students for college-level work and a successful experience in Advanced Placement history and/or government classes. Several student-driven substantial projects will be successfully completed in support of the curriculum.

Pathways: All

Honors Law II

Grade:

11-12

Credit: 1 **Core Course**

Prerequisite: Law I

Description: This elective course explores the American criminal justice system. Causes of crime, investigation strategies and techniques, the trial process (including jury selection, development of case strategy, questioning of witnesses, jury deliberation, and sentencing), corrections, juvenile justice, and hate crimes. Consideration of the law's role in the media will be interpreted and critiqued throughout the course. Students will demonstrate their understanding through an intense mock trial simulation and numerous real-world activities, requiring students to demonstrate strong written and verbal communication skills.

Special Notation: Real case studies are an integral part of our class material. Students are expected to treat case studies and sensitive subject matter with maturity and respect.

Competency: Communications, Digital Literacy

Honors Military History II

Grade: 10-12

Credit: 1 **Core Course**

Prerequisite: Military History I

Description: This advanced course will follow the course of the United States military from the dawn of the 20th Century up through the Post-Cold War world. The course will pick up where Military History I left off by exploring the parallel course that both the nation and military share as the United States emerges as a superpower. Students will use oral history and research skills to help develop a collection of veterans' memoirs for the historical societies. There will be several required readings as well as guest speakers (veterans and re-enactors) and field trips to round out the course of study.

Pathways: All

Competency: Global Studies

Introduction to Psychology

Grade:

11-12

Credit: 1 **Core Course**

Prerequisite: None

Description: This elective course is designed to give the student a broad study of the fundamental concepts and ideology of modern psychology. This course will cover basic familiarity with many of the fundamental concepts and principles of modern psychology while providing more opportunities for enrichment within a broader variety of topics. In addition, the student will be required to complete a number of projects, including supplemental reading with accompanying position papers and a number of self-directed projects intended to deepen their understanding of the science and of themselves.

Pathways: BFIT, HS, SH

Law I

Grade: 10-12

Credit: .5 **Core Course**

Prerequisite: None

Description: This elective provides an introduction to law and the American legal system. Focusing on the rights and responsibility of citizens in a democracy, Law I includes the study of: civil liberties, torts, family law, consumer law, school law and special topics relating to current events. Civil law and the trial system are also included. Guest speakers and real-world learning experiences will be included when possible.

Pathways: All

Competency: Communications

Military History I

Grade: 9-12

Credit: .5 **Core Course**

Prerequisite: None

Description: This course examines America's military history beginning with the Indian Wars of the early 17th century colonial period, through the major wars and conflicts during the 18th and 19th centuries. The course analyzes the evolution, and development of US military strategy, operations, and tactics; examines the changes and improvements in military organization and command and control, and operational planning and logistics support; and assesses the major technological advances in America's weapons, communications, and intelligence gathering capabilities. The course examines America's wars and major conflicts, including the War of Independence, Mexican War, Civil War and Spanish-American War.

Pathways: All

Competency: Global Studies

Sociology

Grade: 11-12

Credit: 1 **Core Course**

Prerequisite: None

Description: This elective course studies the dynamics of group relationships with American society. Major areas of concentration include the development of sociology, sociological research and theory, cultural diversity and conformity, social structure and the socialization process, social control and deviance, social stratification, as well as racial, ethnic and gender inequality. A cumulative project requiring students to apply their classroom knowledge in a sociological examination is required.

Pathways: HS, SH

Competency: Project Based

Sports in Society

Grade: 9-12

Credit: .5

Prerequisite: None

Description: This quarter course will identify and analyze how sports and athletics have shaped our society and culture. Students with an interest in social studies, sports, business, equality and cultural change would enjoy this course. Major topic areas will include Why People Like to Play and Watch, Globalization, Nationalism and Politics in Sports, Race and Multiculturalism, Equality in Sports, The Role of the Fan, the Mega(Business) of Sports and Sports Technology. The course will include a student-driven large-scale project on current issues facing sports.

Pathways: HS, BFIT

Competency: Project Based

World Studies

Grade: 11-12

Credit: 1 **Core Course**

Prerequisite: None

Description: This course focuses on political issues, economic developments and culture of the world. Specific topics include geography, climate, history, and religion. Primary emphasis will be given to recent events and situations occurring around the globe and their impact on the rest of the world. Multiple geographic regions (including but not limited to: Europe, Latin America, Africa, the Middle East, and Asia) will be covered, focusing on not just their history, but perhaps more importantly its cultural development and current issues. Frequent comparisons between these areas and America will be examined.

Competency: Global Studies

STUDENT ACCESS TO CAREER AND TECHNICAL EDUCATION

This section provides guidance on the applicable statutes that address student access to career and technical education. Additional information is included as it relates to charter school students, private school students, home schooled students and foreign students.

Career and technical education shall be made available to every student in the high school program. See 22 Pa Code § 4.23 (d)(1). Districts should not limit the attendance of students eligible for admission to a career and technical center (CTC).

Nonparticipating District of a CTC

If a student attends a district that does not participate in a CTC, the student may, on obtaining consent of the Joint Operating Committee (JOC) of a CTC, attend that CTC. See 24 P.S. § 18-1847. The students of a non-participating district are not limited to attending the CTC that serves the attendance area in which the district is located. Further, a non-participating district cannot mandate that all of its students attend one particular CTC.

If a student of a non-participating district attends a CTC, the district of residence must pay for this education. See 24 P.S. § 18-1847. The school district in which the pupil resides shall be charged for each pupil attending the CTC, an amount equal to the total approved budget for current expenses, debt service and capital outlay divided by the number of pupils enrolled in the school.

Participating District of a CTC

If a student attends a district that does participate in a CTC, the student must attend the CTC in which the district participates. See 24 P.S. § 1850.1(b)(21). Only if the JOC were to send a student to another career and technical center, which accepted the student, could a student attend a CTC different from the one in which his or her district is a participating member. See 24 P.S. § 1850.1(b)(21). This is true even if the CTC in which the district participates does not offer a specific career and technical education program the student is seeking.

Charter School Students¹

Students enrolled in charter schools, including cyber charter schools, may enroll in CTCs if the charter school in which the child is enrolled contracts with a CTC for the provision of services.

Charter schools, including cyber charter schools, are not party to the negotiated agreements between school districts and CTCs. It is the responsibility of the charter school to decide whether or not to make a career and technical school curriculum available to the student and, if so, to contract with a CTC for the provisions of these.

Private School

If a private school student is a resident of a district that participates in a career and technical center, the student is able to receive career and technical education under the dual-enrollment provision of the School Code. Pursuant to 24 P.S. § 5-502: “[n]o pupil shall be refused admission to the courses in these additional schools or departments, by reason of the fact that his elementary or academic education is being or has been received in a school other than a public school.” This provision expressly allows students attending non-public schools to dually-enroll in both the non-public school and the public school in order to participate in programs offered at vocational schools.

Home School

A student receiving home education is not entitled to attend a career and technical education program. The student, however, may seek admission to a career and technical program. The resident school district is not required to pay tuition if a home-schooled student is admitted to a career and technical education program.

Foreign Students²

Career and technical centers must register with the U.S. Immigration and Customs Enforcement's Student and Exchange Visitor Information System (SEVIS) program to be authorized to enroll foreign students. If CTC is eligible to accept students on F-1 visas, the student must pay the tuition to attend the career and technology center. The tuition would be the full, unsubsidized per capita cost of the education.

¹ For additional information, see the applicable BEC, Charter Schools, which can be found at:

http://www.portal.state.pa.us/portal/server.pt/community/purdon's_statutes/7503/charter_schools/507318.

services. When a student chooses to attend a charter school, the student chooses the charter school's educational offerings, which may or may not include a career and technical education. A charter school may contract with a CTC to provide a career and technical education option for its students, but a charter school is not required to provide such an option unless it becomes part of a student's IEP. The charter school and the CTC must establish an appropriate charge for charter school students receiving a career and technical education. It is the policy of the JOC of the Cumberland Perry AVTS not to enter into an agreement with cyber charter schools for the purpose of delivering career and technical education.

If a charter school student does attend a CTC, the charter school shall receive the full Selected Expenditure to which it is entitled from the student's resident school district, and the charter school must pay the CTC the established contractual charge for a student who receives a career and technical education. A student's school district of residence shall not be responsible for paying a CTC for the career and technical education received by a charter school student. The Department has no authority to withhold payments from the charter school in the event there are disputes regarding payments to a career and technical school by a charter school. Such disputes shall be resolved between the charter school and the career and technical school based on the contractual agreement between them.

² For additional information, see the applicable BEC, Foreign Students' Eligibility for Enrollment, which can be found at:

http://www.portal.state.pa.us/portal/server.pt/community/purdon%27s_statutes/7503/foreign_students%27_eligibility_for_enrollment/507311.

TESTING PROGRAMS

ACT—American College Test

Grade:

11-12

Description: The ACT is a college admission test consisting of four parts: English, Math, Reading, and Science Reasoning. Completion with satisfactory scores is required for college entry. Many health majors are encouraged to take this test. Fee and registration information and practice booklets may be obtained via ACT's website. Fee waivers are available for students who qualify for free/reduced lunch.

Students are encouraged to register online at www.act.org.

AP Exam*

Grade: 10-12

Description: The Advanced Placement Exam is the culmination of the Advanced Placement course. This exam is taken at the end of the course. It is given during the school day during the first two weeks of May as designated by College Board. Satisfactory scores on this exam may earn a student college credit when they enroll in college. Fee waivers are available, to help reduce the cost of the test, for those who qualify for free/reduced lunch.

* AP Exam Ordering Information and Timeline (beginning 2019-2020 school year)

Grade: 10-12

For the 2020-2021 school year all students will need to decide whether or not to take an AP exam(s) and have their exams ordered and paid for by November 1, 2020. If your child decides to register for an AP exam after the deadline date, they will be assessed a \$40/exam late fee. In addition, a \$40/exam cancellation fee will be assessed for any exam order you cancel after the deadline date.

ASVAB Career Exploration Program

Grade: 10

Description: The Armed Service Vocational Aptitude Battery Career Exploration program will be given to all 10th grade students. It is an invaluable tool to help the students with their future educational and career plans. This assessment includes eight individual tests covering verbal and math skills, mechanical knowledge, electronics, and several other areas. It also produces three career exploration scores for verbal skills, math skills, and science and technical skills. These three scores serve as one of several pieces of information about your child that can aid in the exploration of wide variety of career options.

ASVAB

Grade:

11-12

Description: The Armed Service Vocational Aptitude Battery is for students interested in attending the military. The test consists of eight short individual tests and measures verbal skills, math skills, and science and technology skills. The test is given one time per year at the high school during the school day.

PSAT/NMSQT

Grade:

10-11

Description: The Preliminary Scholastic Aptitude Test is a practice SAT test and is open to all college-bound students in grades 10 and 11. It is administered only once per year in October at the high school during the school day. Not only does it serve as a practice test, but scores earned in the junior year determine eligibility for consideration in the National Merit Scholarship Program. Fee and registration information may be obtained through the Counseling Office. Fee waivers are available for 11th grade students who qualify for free/reduced lunch.

SAT—Scholastic Aptitude Test

Grade:

11-12

Description: The SAT is a college admission test made up of two sections: Evidence Based Reading/Writing and Math. Completion with satisfactory scores is required for college entry. Juniors are encouraged to take the test at least two times the spring of their junior year. Fee and registration information and practice materials may be obtained via the College Board website. Fee waivers are available for students who qualify for free/reduced lunch.

Students register online at www.collegeboard.com.

****Students should consult Naviance, College Websites, and/or their counselor to determine which college entrance examination is appropriate for their needs****

GENERAL INFORMATION

Advanced Placement (AP), Honors, and Dual Enrollment Courses

Big Spring High School offers academic courses as Honors, Advanced Placement (AP), and Dual Enrollment/College in the High School that provide challenging educational opportunities requiring in-depth research, writing, and advanced study skills. Students are recognized for meeting the academic challenges of these courses with grade weighting:

- **Honors Courses:**

For the class of 2020, honors courses will carry a weight of .5

For the classes of 2021 and after, honors courses will not be weighted

- **AP Courses:**

For the class of 2020, AP courses will carry a weight of 1.0

For the classes of 2021 and after, AP courses will carry a weight of .5

- **Dual Enrollment/College in the High School:**

For all classes, Dual Enrollment/College in the High School will carry a weight of .5

Honors, Dual Enrollment, and Advanced Placement (AP) courses include:

Honors Algebra II Honors Art Humanities Honors Chemistry Honors Physics I Honors Physics II Honors Drawing & Painting Honors English II Honors English Veritas/Honors World Studies Honors Geometry Honors Government Honors Law II Honors Military History Honors Pre-Calculus Honors Trigonometry Honors Spanish IV, V Honors French IV, V	Accounting I (Dual Enrollment) HACC Dual Enrollment Courses Shippensburg University Dual Enrollment Courses Penn State Mont Alto Dual Enrollment Courses AP Biology AP Calculus AB AP Calculus BC AP Chemistry AP English Language & Composition AP English Literature & Composition AP Environmental Science AP Music Theory AP Physics C-Mechanics AP Statistics AP Studio Art AP US Government and Politics AP US History AP World History- Modern
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Big Spring Cyber School

Online courses are available through Big Spring Cyber School. Priority is given to courses that are not offered in the Big Spring School District and in situations where individual scheduling conflicts prevent a student from enrolling in a desired course. To inquire about courses offered and eligibility, please see your counselor. All student enrollments are pending administrator approval.

Capital Area School for the Arts (CASA)

Students may apply to attend the arts school which is located in the city of Harrisburg. CASA provides intense study in visual art, dance, film and video, music, and theatre. An audition in the spring is required in order to be accepted to the school. The student and parent are responsible for the CASA tuition and providing his/her own daily transportation to and parking in the city of Harrisburg. Please speak with your school counselor if you are interested.

Class Rank

Class rank is determined by arranging all students in order of their weighted grade point average. This class ranking is based on the cumulative weighted GPA earned on ALL completed courses throughout the student's high school career.

College Course Opportunities – Off Campus

In rare circumstances students may be permitted to take courses off-campus. Requesting an off-campus college course must go through your school counselor and receive approval from the building principal.

Gifted Program

Students who have been identified as being intellectually gifted or talented, according to state and school district criteria, may participate in the Gifted Support program. The gifted specialist/school counselor meets with each student who has a GIEP to determine yearly goals.

Grade Point Averages

Grade point averages are calculated on the percentages or quality points earned in all completed courses divided by the number of credits earned. The cumulative grade point average is weighted for all honors, AP and dual enrollment courses. Big Spring students' GPAs are updated every marking period but only include completed courses; therefore, any quarter grades earned in semester long classes are not counted in the quarter 1 or quarter 3 cumulative GPA.

NOCTI

The NOCTI Assessment program evaluates students in Agricultural Education on their technical skills at the completion of their high school career. It is given within the first three weeks of May. Students completing in excess of 1320 hours of instruction in the Agricultural Education scope and sequence will be required to take the written and performance NOCTI assessments. Satisfactory scores on this assessment will result in students receiving a Certificate of Competency in the area of production agriculture.

Special Education

Students who have been identified as being in need of Special Education services, according to state and school district criteria, may participate in the Special Education program. Each student is provided a case manager who works with teachers, parents, and students to determine the appropriate course, progress, and to write their Individualized Education Program.

COLLEGE PROGRAMS

CIHS—College in the High School (HACC)

Grade: 11-12

Description: Harrisburg Area Community College (HACC) College in the High School Program allows qualifying high school juniors and seniors to earn college credit from HACC's adjunct professors right at the high school! College in the High School credits are fully transferable to HACC and other higher education institutions. CIHS students receive the same quality, college-level instruction that they would on a HACC campus at a discounted rate. Upon successful completion of the course, students receive HACC college credits along with high school credit. If college is in your future, there is no better way to start!

Cost: Students pay \$50 per HACC credit. Students will be billed directly from HACC.

Application Process: Students must submit a HACC Application for enrollment.

The following College in the High School courses are offered at Big Spring.

CIHS Course	Placement Test Required?	HACC Credits Received	Big Spring Credits Received	Approximate Cost of the Course
Accounting 101	Yes	4.0	1.0	\$200

Shippensburg University – Ship Start Program

Grade: 12

Description: The Ship Start Program allows qualifying high school seniors to earn college credit from the campus of Shippensburg University during the school day. This program is intended for senior high school students who demonstrate College Readiness Skills through their academic coursework, GPA, PSAT, SAT and /or AP Scores. **Students will be limited to enrolling in two (2) courses per semester.** Students will be able to choose from Ship's diverse courses including 100 level/General Education Courses.

***Students are responsible for their own transportation**

Cost: \$100/credit plus limited fees and book costs.

Application Process: Students must submit a Ship Start Application for admission.

Harrisburg Area Community College (HACC) Dual Enrollment

Grade: 12

Description: Harrisburg Area Community College allows qualifying high school seniors to earn college credit from the campus of HACC during the school day. This program is intended for senior high school students who demonstrate College Readiness Skills through their academic coursework, GPA, PSAT, SAT and /or AP Scores. **Students will be limited to enrolling in two (2) courses per semester.** Students will be able to choose from HACC's diverse courses including 100 level/General Education Courses.

***Students are responsible for their own transportation**

Cost: \$100/credit plus book costs.

Application Process: Students must submit a Dual Enrollment HACC Application for admission.

Description: Pennsylvania State University allows qualifying high school seniors to earn college credit from their Mont Alto Campus during the school day. This program is intended for senior high school students who demonstrate College Readiness Skills through their academic coursework, GPA, PSAT, SAT and /or AP Scores. **Students will be limited to enrolling in two (2) courses per semester.** Students will be able to choose from Penn State's diverse courses that include 100 level/General Education Courses.

***Students are responsible for their own transportation**

Cost: Course tuition at a 50% reduced rate

Application Process: Students must submit a Dual Enrollment PSU Application for admission.

ADDITIONAL NON-CREDITED CAREER EXPLORATION OPPORTUNITIES

ACE Mentoring Program

Grade: 11-12

This is an after-school program that gives students a hands-on introduction to architecture, construction management, and engineering. Mentors from participating companies meet with the students approximately 15 times during the year. Transportation and related costs of participation are the student/parent's responsibility. For more information, see Mrs. Black, certified career coordinator.

Communication Arts Career Exploration Program

Grade: 11-12

This program provides an opportunity for students to learn about careers in advertising, newspaper publication, graphics and video, as well as, radio and TV through visitations to various related businesses. Visits occur the first Friday of each month. Students may sign up for as many as desired. The student's career goal and year of graduation will be deciding factors in the selection process. Participation will comprise of 10 local school districts which make up the Cumberland-Perry Education Consortium. For more information, see Mrs. Black, certified career coordinator.

Construction Career Exploration Program

Grade: 11-12

This program provides an opportunity for students to learn about careers in the construction and engineering field through visitations to various related businesses. Visits occur the last Thursday of each month. Students may sign up for as many as desired. The student's career goal and year of graduation will be deciding factors in the selection process. Participation will comprise of 10 local school districts which make up the Cumberland-Perry Education Consortium. For more information, see Mrs. Black, certified career coordinator.



Cumberland Perry Area Vocational Technical School (CPAVTS) serves students from fourteen high schools in Cumberland, Perry, York, and Adams County. CPAVTS is an extension of your high school, offering comprehensive instruction in 22 career and technical programs. Students attend CPAVTS for half of their school day, taking courses in their technical program plus social studies. Students attend their sending high school for English, Science, Mathematics, Physical Education, and other graduation requirements.

The full scope of skills and competencies in the technical programs at CPAVTS are taught over a three-year course sequence. However, students may attend CPAVTS for one or two years to support their career goals.

CPAVTS students are expected to be responsible and respectful, demonstrating safe work habits at all times. Students must be able to understand and comply with all school rules and procedures.

CPAVTS has a competitive application process. Students are admitted based on their application score and school district enrollment quotas. See your sending school counselor for an application. Clicking on the program names below will connect you to the program web page at www.cpavts.org.

2020-2021 CAREER PATHWAYS AND PROGRAMS AT CPAVTS

<u>CONSTRUCTION AND MAINTENANCE</u> Carpentry Electrical Construction and Maintenance Heating/Ventilation/Air Conditioning Horticulture/Landscaping Masonry	<u>ARTS & TECHNOLOGY</u> Advertising Art & Design Computer Networking Computer Programming
<u>MANUFACTURING</u> Automation, Robotics & Electronics Precision Machine Technology Welding Technology	<u>HEALTH SCIENCES</u> Dental Assistant Nurse/Nursing Assistant Emerging Health Professionals
<u>HUMAN SERVICES AND HOSPITALITY</u> Cosmetology Criminal Justice Culinary Arts Early Childhood Education	<u>TRANSPORTATION & LOGISTICS</u> Auto Collision Technology Automotive Technology Diesel Technology Logistics & Warehouse Management

Additional information on curriculum, college credit opportunities, and uniform requirements is available online at www.cpavts.org.

ADVANTAGES FOR STUDENTS ATTENDING CPAVTS

Earn College Credit - College in the High School Program

The College in High School (CHS) program allows high school students to take college classes while enrolled at CPAVTS during the regular school day. Students who are eligible to take College in the High School courses can earn credits toward high school graduation and credits towards a college degree at the same time. Harrisburg Area Community College or Pennsylvania College of Technology assesses and approves CPAVTS instructors to teach these courses. HACC or Penn College awards college credits to students who complete the courses with a passing grade and all credits are eligible to transfer to other colleges and universities depending on agreements with those schools. For College in the High School course details go to www.cpavts.org.

Earn College Credit - Program of Study (POS) College Articulation Agreements

Twenty programs at CPAVTS are recognized by the Pennsylvania Department of Education as a "Program of Study". Students in these programs have the opportunity to earn college credit at various post-secondary schools in Pennsylvania provided they meet the following requirements:

1. Graduate from high school
2. Earn at least 2.5 GPA in your program courses
3. Achieve a score of "Advanced" or "Competent" on the NOCTI exam
4. Successfully complete all tasks on the Program of Study task list – requires all three years of a program.

Suggested Course Sequence by the Pennsylvania Department of Education for Programs of Study
For Students Enrolled in Career and Technical Programs:

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Earth Science	Biology	Chemistry	Elective
Social Studies	Social Studies	Social Studies	Social Studies
Algebra I or Pre-Algebra	Geometry or Algebra I	Algebra II or Geometry	Additional Math
Physical Education	Physical Education	Physical Education	Physical Education
Electives	CPAVTS Program	CPAVTS Program	CPAVTS Program

Additional information on Program of Study and which colleges are participating can be found at www.cpavts.org.

Earn a Pennsylvania Skills Certificate

The Pennsylvania Skills Certificate was created by the PA Department of Education to recognize career and technical education students who have shown advanced skill achievement in their career and technical program. Students must complete 50% of the program and be seniors to be eligible to earn a PA Skills Certificate.

To earn the Pennsylvania Skills Certificate, students must achieve at the advanced level on the end of program NOCTI test. The test consists of two parts – written and performance. The written test covers factual knowledge, technical information, understanding of academic principles and problem solving related to the technical field. The performance test allows students to demonstrate their skills to industry professionals who proctor the exam.

Earn Industry-Recognized Certifications

CPAVTS have the opportunity to earn industry certifications which are specific to their career program. Examples include PA State Inspection certification for Auto Tech students and Certified Nursing Assistant certification for nursing students. A complete list of certifications is listed under each program description. During the 2017-2018 school year, over 300 CPAVTS students earned at least one industry certification.

CONSTRUCTION AND MAINTENANCE

CARPENTRY

There are two types of carpentry work: rough and finish. Rough carpentry includes framing, boarding, sheathing, bracing, roofing, and studding; finish carpentry includes the installation of finished flooring, stair work, siding, trim, wallboards, windows, and hardware. Students in the **Carpentry** program will learn the basics of both rough and finish carpentry, including such areas as blueprint reading, using power and hand tools, framing techniques, installing trim and hardware, estimating, and identifying materials. Many of these skills are developed through live work projects performed throughout the school. Safety instruction is emphasized throughout the program.

<u>Carpenter</u>	<u>Industry Certifications</u>	<u>Related Occupations</u>
2017 Median Wage in PA \$50,770 per year	OSHA – 10 PA Builders Association	Estimator Dry wall installer Construction & building inspector
Program of Study Approved	2017 PA In Demand Occupation List	

ELECTRICAL CONSTRUCTION AND MAINTENANCE

Students in the **Electrical Construction & Maintenance** program receive classroom training and practical experience in the installation of circuits, switches, conduits, circuit breakers, and other electrical devices; instruction includes the proper use and care of hand tools and equipment used to install electrical systems on a construction site. Students learn to connect and disconnect electrical equipment and determine proper installation and operation of electrical work, apply procedures used in interior circuits and outlets, and troubleshoot electrical malfunctions. Special emphasis is placed on the National Electric Code Specifications used in residential, commercial, and in industrial electrical construction projects.

<u>Electrician</u>	<u>Industry Certification</u>	<u>Related Occupations</u>
2017 Median Wage in PA \$62,070 per year	OSHA – 10 PA Builders Association	Electrical engineer Avionics technicians Construction & building inspector
Program of Study Approved	2017 PA In Demand Occupation List	

HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION

The **Heating, Ventilation and Air Conditioning (HVAC)** program provides the fundamentals of installation, repair, and maintenance of equipment and accessory parts used for heating, air conditioning, and cooling systems. Students learn basic electricity as it applies to the electrical power source and activities used in air conditioning, heating, and refrigeration units. Various equipment and training simulators are used to teach basic refrigeration in chilling and freezing systems. They will learn to solder and braze while developing skills required for the installation, repair, and maintenance of air conditioning, heating, and refrigeration units. Instruction includes: connecting ducts, refrigerant lines, and electrical hookups to power sources; the removal and/or replacement of parts by using torches, electrical meters, testing equipment, gauges, and hand tools; diagnosing unit breakdowns; disassembling and reassembling systems; making adjustments to ensure efficient operations; and reading basic blueprints and writing diagrams. The program also covers many of the basic skills needed in the plumbing trade, providing those students who are interested an opportunity to pursue a career in plumbing.

<u>HVAC-R Technician</u>	<u>Industry Certification</u>	<u>Related Occupations</u>
2017 Median Wage in PA \$51,360 per year	EPA 608, PA Builders Association, OSHA - 10	Service technician Plumber Sheet metal or pipe fitter
Program of Study Approved	2017 PA In Demand Occupation List	

HORTICULTURE AND LANDSCAPING

There are several career pathways in the **Horticulture** program. Greenhouse managers, soil and plant scientists, groundskeepers, and landscape designers are just a few of the occupations in this wide-ranging field. Students spend time in the greenhouse, classroom, and outdoors as they learn identification, botany, proper plant care, and other factors impacting care and growth of plant materials. This knowledge is then utilized in the design and preparation of decorative and functional sites. Topics include sustainable practices such as hydroponics and environmental issues facing today's society, design and installation of plants, ponds, and hardscaping, laws and zoning regulations, business ethics and practices, safety and equipment operation, floral design, turf management and irrigation, and other related areas. We also offer college in the high school along with certifications for OSHA. Come explore the opportunity waiting for you!

<u>Landscaping & Groundskeeper</u>	<u>Industry Certification</u>	<u>Related Occupations</u>
2017 Median Wage in PA \$29,400 per year Program of Study Approved	OSHA- 10 2017 PA In Demand Occupation List	Floral designer Groundskeeper Landscape

MASONRY

The **Masonry** program provides the fundamental skills needed to work with bricks, blocks, and concrete. Students learn brick and block laying; mortar mixing; scaffold construction; building construction; the proper use of masonry tools; and how to read blueprints to determine an accurate brick layout following the builder's specifications. Additionally, students check alignment and positioning of bricks by using a dry course; check for horizontal or vertical straightness by using a mason's level; gauge lines, and plumb lines; and use story gauge rods to check work. Special emphasis is placed on mortar mixing and proper spreading of mortar to ensure accurate spacing of the joints. Students learn the safe use and proper care of hand tools such as trowels, jointers, rules, squares, brick hammer, mason levels, and gauge lines.

Brick and Block Mason

2017 Median Wage in PA
\$53,850 per year

Program of Study Approved

Industry Certification

OSHA – 10
Rough Terrain Forklift

2017 PA In Demand Occupation List

Related Occupations

Tile setter
Cement finisher
Construction supervisor

ARTS AND TECHNOLOGY

ADVERTISING ART & DESIGN

A large percentage of merchandising and advertising for modern promotion is done through the medium of **Advertising Art and Design**. The purpose of this course is to help prepare students for an entry-level job or to prepare the student to advance into post-secondary training at colleges and art schools. Throughout the program, students will maintain a portfolio to promote their work and talent when they graduate. The major emphasis is on the basic principles of design: color, development of skills, exploration of media, and Advertising Art and Design practices. Special emphasis is placed on manual illustration and layout skills in the area of art production, technical features of design, layout and composition, and color theory. Students will prepare graphic and advertising projects from the idea stage through to pre-press using the current Adobe Creative Suite software.

Graphic Designer

2017 Median Wage in PA
\$50,570 per year

Program of Study Approved

Industry Certification

Adobe® Certification

Related Occupations

Web page designer
Graphic illustrator

COMPUTER NETWORKING

The **Computer Networking** program is designed to give students a broad background in the fundamentals of designing, installing, and maintaining a computer network. Specifically, students will cover the following topics: Computer hardware, troubleshooting, repair, and maintenance, operating systems and software, network technologies, network media and topologies, network devices, network management, network tools and troubleshooting, and security fundamentals. Emphasis will be placed on preparing students to test for industry credentials and certifications.

Computer Network Administrator

2017 Median Wage in PA
\$76,400 per year

Program of Study Approved

Industry Certification

A+, Net +, Security +
CCNA Routing & Switching

Related Occupations

Network Administrator
Systems Analyst
Security Specialist

COMPUTER PROGRAMMING

In **Computer Programming** students will learn to write, develop, and test code for applications to run on computer systems. In addition, they will learn about analyzing and designing solutions to troubleshoot software issues. Students will cover the following topics: understanding computer basics, interpret logical expressions using Boolean Algebra, create simple programs using algorithms, apply program analysis for evaluating algorithms and testing and debugging systems, and learn about computing practice focusing on data structures and object-oriented program design. Emphasis will be on completing college level coursework leading to earning college credits through our agreement with Harrisburg University of Science and Technology.

Computer Programmers

2017 Median Wage in PA
\$80,830 per year

Industry Certification

To be determined

Related Occupations

Software Developers, Systems
Software Developers, Applications
Web Developers

2017 PA In Demand Occupation List

HEALTH SCIENCES

DENTAL ASSISTANT

Students in the **Dental Assisting** program learn how to properly aid dentists and dental hygienists. During the course of the program, they will learn the proper techniques that go into every aspect of assisting in a dental office, from taking x-rays to scheduling appointments. To ensure that students are trained as accurately as possible, they practice on modern dental equipment and become familiar with tools common to the profession. Other tasks assigned in this program include learning proper sterilization, instrument transferral, infection control, and preventative healthcare techniques; and assisting with basic dental procedures. While students emerge from the Dental Assisting program fully equipped to work as a dental assistant, further education is required before the student can achieve other positions in the field.

Dental Assistant

2017 Median Wage in PA
\$37,870 per year

Industry Certification

PA Dental Radiographic
First Aid/CPR/AED

Related Occupations

Dental hygienist
Radiologic Technicians

Program of Study Approved

2017 PA In Demand Occupation List

NURSING/NURSING ASSISTANT

Students in the **Nursing Assistant** program explore a variety of health professions to develop an awareness of job opportunities in the field. They develop the skills needed to perform effectively in entry-level positions and to receive a good foundation for continued study. Nursing program students learn patient care, first aid, and laboratory skills, and receive simulated work experiences such as assisting doctors with physical exams; demonstrating laboratory skills; assisting with patient care in the office or hospital; and practicing long-term care settings. Special emphasis is placed on personal hygiene; instrument and equipment identification; telephone training; correspondence and record keeping; basic nursing procedures; infection control; standard precautions; sterilization; and OSHA standards. Students are also given instruction in the sciences related to this field including medical terminology, anatomy, pharmacology, and laboratory techniques. This program will provide students with an opportunity to learn advanced functions, including clinical experience with patients through affiliation with Bethany Village Retirement Centre.

Certified Nursing Assistant

2017 Median Wage in PA
\$30,010

Industry Certification

C.N.A.
First Aid/CPR/AED

Related Occupations

Nurse practitioner
Health Aide
Practical Nursing

Program of Study Approved

2017 PA In Demand Occupation List

EMERGING HEALTH PROFESSIONALS

The Emerging Health Professionals Program is a SENIOR ONLY program that combines college level dual enrollment courses, job shadowing in various healthcare facilities, and a skills-based patient care curriculum. The program is designed for high school seniors interested in a pathway towards careers requiring post-secondary education in the healthcare industry. The Emerging Health Professionals Program is a half-day program that runs the duration of the school year in conjunction with required high school curriculum. Students spend two days a week taking college courses, two days a week in a health care setting and one day a week developing skills. Students in this program take Anatomy and Physiology I and II at our partner college for a total of eight college credits. Applicants must have completed one year of high school Biology and one year of High School Chemistry with a GPA of 3.0 (or % equivalent). Students must provide their own transportation and are responsible for college dual-enrollment costs. This program has a separate application, which may be found at www.cpavts.org--> Programs □ Health Sciences --> Emerging Health Professionals.

Career pathways may include:

- Medical Doctors
- Physical Therapists
- Occupational Therapists
- Registered Nurses
- Physician's Assistants
- Pharmacists
- Dental Medicine
- Radiologists
- Veterinarians
- AND MANY MORE!

HUMAN SERVICES AND HOSPITALITY

CULINARY ARTS

Culinary Arts is a program that offers a broad range of skills and knowledge concerning the selection, preparation, and handling of foods. Skill development will focus on: safety and sanitation; dining room service; preparation of food; buffet service; meat cutting; baking; store room procedures; and basic management skills. Unlike the home economics courses offered by most general high schools, the instruction and on-the-job training will be conducted in a fully equipped cafeteria and restaurant at Cumberland Perry AVTS.

Chef
2017 Median Wage in PA
\$54,110

Industry Certifications
ServSafe®

Related Occupations
Cook, Pastry chef
Butcher, Food Service Manager
First-Line Supervisors of Food
Preparation and Serving Workers

Program of Study Approved

2017 PA In Demand Occupation List

COSMETOLOGY

The **Cosmetology** program at CPAVTS gives students a great head start to a lucrative career. Our curriculum is rigid, however, by the time students graduate they will have skills desirable to employers in the Cosmetology industry. Students in the program learn all aspects of hair care, skin care, and nail care, and not only do they practice on mannequins but they practice on each other as well. Once the student earns 300 hours they are ready to apply skills to customers in the Cosmetology clinic. Instruction also includes resume writing, interviewing, marketing and retailing so students are prepared to start the job search process. Students need to earn 1250 hours to be eligible to test for the PA Cosmetology License Exam.

Cosmetologist
2017 Median Wage in PA
\$26,570 per year

Industry Certification
State Board of Cosmetology

Related Occupations
Barber
Make up artist

CRIMINAL JUSTICE

Students in the **Criminal Justice** program learn administrative procedures; vehicle code and accident investigation; crime codes and criminal investigation; prevention of crime; laboratory procedures; and supplemental activities. Simulated activities develop skills in procedures used in police patrol, criminal investigations, accident investigation, report writing, use of Crime Code and Pennsylvania Vehicle Code, first aid, and firearms training. Special emphasis is given toward each student's career objectives. Students develop skills needed to perform effectively in police departments and security agencies, and receive a good foundation for continued study in Police Administration or Criminal Justice.

Police Officer
2017 Median Wage in PA
\$66,460 per year

Industry Certification
First Aid/CPR
National Incident Management

Related Occupations
Police Detective
Fire Fighter
Correctional Officer

Program of Study Approved

EARLY CHILDHOOD EDUCATION

The **Early Childhood Education** program instructs students in the preparation and presentation of nutritional snacks, instructional materials, schedules, and curriculum plans. They will also cover how to manage parent involvement, enrollment, safety/health factors, and discipline. A portion of the program is devoted to child development and preschool child growth patterns. Students will develop techniques that will be applied in the preschool program. Time will be provided to do classroom observations of the preschool children, as well as peer observations of fellow teachers. The student will be responsible for supervising the entire preschool laboratory school program including the children's schedule, attendance, greeting children, enrollment, art, music, science, and indoor/outdoor play activities. Students have a portion of the preschool day set aside for "Learning Centers", a time in which they work independently with an assigned preschool child in an area that the child is currently strengthening.

Pre-School Teacher
2017 Median Wage in PA
\$28,650 per year

Industry Certification
CDA Ready Certification
First Aid/CPR

Related Occupations
Group supervisor
Head start specialist
Child care director

Program of Study approved

TRANSPORTATION AND LOGISTICS

AUTOMOTIVE COLLISION TECHNOLOGY

The **Automotive Collision Technology** Program provides students with the training necessary to repair damaged automotive vehicles. Instruction includes the repair and replacement of defective parts to restore a vehicle to good condition. Students learn how to operate hydraulic jacks; how to use pry bars, dolly blocks, and mallets for the removal of dents; the techniques of metal finishing used to fill the damaged areas of the vehicle with body plastics; and how grind and sand until the body is smooth. Our students also learn to replace auto body parts by installing new sections, and by welding new pieces and panels. Instructions in braising, soldering, and welding practices are stressed. Students develop skills in the preparation of surfaces to be painted, matching and mixing paint, and in spraying techniques. In addition, students install trim and glass, use gauges necessary for frame straightening, and estimate the cost of the repair service.

Autobody Repair Technician

2017 Median Wage in PA
\$45,370 per year

Industry Certification

PA Inspection and Emissions

Related Occupations

Painters & customizers
Insurance adjuster

Program of Study Approved

AUTOMOTIVE TECHNOLOGY

The **Automotive Technology** program provides students with the entry-level skills and knowledge needed for a career in the automotive field. Specialized classroom and shop exercises are designed to provide instruction in the following areas: engine repair, suspension and steering, brakes, electrical/electronic systems, heating and air conditioning, engine performance, manual drive train and axles, automatic transmission/transaxle, emissions control, hybrid technology, and alternative fuels. Students are taught to use computerized technical service manuals and are also trained to participate in the Pennsylvania state safety and emissions inspection program. Qualified level 3 students are able to participate in the cooperative education program. This program allows students to gain paid work experience at participating repair facilities while attending school.

Automotive Technician

2017 Median Wage in PA
\$39,510 per year

Industry Certification

PA Inspection and Emissions

Related Occupations

Repair estimator
Safety or emissions inspector

Program of Study Approved

2017 PA In Demand Occupation List

DIESEL TECHNOLOGY

Students in the **Diesel Technology** course will receive training in all areas of diesel engine construction, operation, troubleshooting and repair, and in the maintenance, servicing, and repair of over-the-road trucks, trailers and transportation equipment. The first year of instruction will focus on diesel powered engines (this is primarily related to transportation equipment, but can also be applied to diesel powered construction equipment, high lifts, farm machinery and other diesel-powered equipment). Electrical systems, turbo chargers, engine speed governors and lubrication systems are a few examples of the engine subsystems that are covered. Students will be assisted in developing a keen attention to detail, which is necessary for success in this trade. The second and third year students study the other components and systems of the truck: transmissions, rear axles, clutches, drive lines, batteries, starters, alternators, steering, suspension, alignment and air conditioning, just to name a few. Instruction will be provided in oxyacetylene, AC/DC and MIG welding operations. Students who qualify will also be eligible to take the Pennsylvania Vehicle State Safety Inspection Program for mechanics and EPA, type 609 air conditioning certification is also offered.

Bus and Truck Mechanic

2017 Median Wage in PA
\$44,680 per year

Industry Certification

PA Inspection and Emissions
Air conditioning 609, OSHA 10

Related Occupations

Mobile heavy equipment repair
Farm equipment repair

Program of Study Approved

2017 PA In Demand Occupation List

LOGISTICS AND WAREHOUSE MANAGEMENT

Logistics & Warehouse Management students will receive training in the technical and "hands on" aspects of operating a warehouse. Instruction will center on "inventory control", which is a plan for supply needs; control of goods received; efficient accessible storage; and proper distribution of materials. Effective record keeping is stressed. Additional activities will include: materials organization; inspection of goods and accounting for warehouse merchandise; receiving and shipping practices; and the use of power equipment such as forklifts, electric pallet jacks, rollers, and conveyor belts for loading, unloading, or placement of packaged merchandise in warehouse or storage areas. Students will receive actual training in "live" work situations. His/her experience will be comprised of working in a warehouse area that stores in excess of \$100,000 of stock merchandise a year and will become familiar with handling merchandise that ranges in weight from one ounce to three tons. The program also offers the use of database (computer) entry system for stored materials.

Shipping and Receiving Clerk

2017 Median Wage in PA
\$33,850 per year

Industry Certification

OSHA – 10

Related Occupations

Stock supervisor
Distribution clerk
Forklift operator

Program of Study Approved

2017 PA In Demand Occupation List

MANUFACTURING

AUTOMATION, ROBOTICS & ELECTRONICS

Automation, Robotics & Electronics (also commonly called "Electromechanical Technology" or "Mechatronics") is a three-year program that prepares students for employment and for continued education. Students will learn to design, install, troubleshoot, and repair today's modern automation, robotics, and industrial equipment. Instructional topics include: Industrial Motor Controls, Robotics and Electronics, Programmable Logic Controls, Mechanical Power Transmission Systems, Fluid Power Systems/hydraulics/pneumatics, Blueprints and Schematics, Electricity and Electrical Systems, and A/C and D/C Circuitry.

Electromechanical Technician

2017 Median Wage in PA
\$46,960

Industry Certification

TBA

Related Occupations

Mechatronics Engineers
Industrial Machinery Mechanics
Electric Motor, Power Tool, and
Related Repairers

Program of Study Approved

2017 PA In Demand Occupation List

PRECISION MACHINE TECHNOLOGY

The **Precision Machine Technology** program prepares students for a challenging and rewarding career and provides them entry level training for the manufacturing industry. Students will begin with bench work, blueprint reading, and layout. They will then progress to learning precision measuring tools and techniques to ten thousandths of an inch (.0001"). Students will also learn machining techniques on manual vertical milling machines and manual lathes before progressing on to CNC (Computer Numerical Control) machines. An emphasis on the programming and set up are also included in the CNC training along with instruction on MasterCam and SolidWorks computer software. The course is designed to prepare students for a career as a machinist but is an excellent choice for a student with the desire to become an engineer.

Machinist

2017 Median Wage in PA
\$43,480

Industry Certification

NIMS - multiple

Related Occupations

CNC operator
Tool and die maker
Maintenance Technician

Program of Study Approved

2017 PA In Demand Occupation List

WELDING TECHNOLOGY

Welding offers training in oxyacetylene and AC/DC arc welding, semi-automatic MIG, plasma cutting, and TIG welding systems. Starting with planning and layout work, the student progresses to setting up and operating welding, brazing, and cutting equipment, oxyacetylene welding light gauge metals in all positions, and shielded metal arc welding in all positions. Emphasis is placed on blueprint reading to identify properties of metal; metal types; types and use of electrodes and welding rods; electrical principles; and welding symbols. The use of manuals and specifications charts and the understanding of welding standards established by the American Welding Society are stressed. Training will be offered in the planning, layout, forming, joining and fabrication of various shapes in light and heavy gauge metals and pipe. Students learn to use specialized hand tools and to operate shears, forming and shaping machines, drill presses, and metal cutting saws.

Welding Technician

2017 Median Wage in PA
\$42,910 per year

Program of Study Approved

Industry Certification

AWS®

2017 PA In Demand Occupation List

Related Occupations

Sheet metal worker
Boilermaker
Solderers & Brazers



NCAA Eligibility Information is available in the
Counseling Office or online at www.eligibilitycenter.org

NCAA FRESHMAN-ELIGIBILITY STANDARD QUICK REFERENCE INFORMATION

The NCAA Eligibility Center certifies the initial academic eligibility and amateur status of all college-bound student-athletes who wish to complete NCAA Division I or II athletics. Please read over the following information carefully and visit www.eligibilitycenter.org for complete information.

NCAA Approved Course List

<u>English</u>	<u>Social Science</u>	<u>Mathematics</u>	<u>Natural/Physical Science</u>	<u>Additional Core Courses</u>
AP Language and Comp	American Studies	Algebra I	Anatomy and Physiology	French I
AP Literature and Comp	AP European History	Algebra II	AP Biology	French II
College Preparatory English	AP Psychology	AP Calculus AB	AP Chemistry	French III
Creative Writing	AP US- Government	AP Calculus BC	AP Environmental Science	H- French IV
English IA	AP US History	AP Statistics	AP Physics C	H- French V
English IIA	AP World History	Applied Statistics	Biology	Spanish I
English IIIA	Current Events	Coding Gizmos	Biotechnology	Spanish II
H -English IV - Veritas	Economics	Coding Java	Chemistry	Spanish III
H English IA	Geography	Computer Science Principles	Environmental Science	H - Spanish IV
H- English III	Government	Geometry	H- Chemistry	H- Spanish V
H-English IIA	H- American Studies	Geometry II	H- Physics 1	
LS English	H- Law II	H Geometry	H- Physics II	
LS Literature	H- World Studies	H- Algebra II	H-Biology	
Public Speaking	H-Government	H- Pre -Calculus	Intro to Forensics	
Shakespeare	H-Military History II	H- Trigonometry	Meteorology/ Astronomy	
	Intro to Psychology	LS Algebra	Microbiology	
	Law I	LS Rep Math	Oceanography	
	Military History	Pre-Calculus		
	World Studies	Statistics		

