Pathways to Success

High School Course Description Booklet

2016-2017

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 2016-2017 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 Pathways, including through Advisement Sessions. 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 2016-2017 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 J August

William J. August
Principal

Big Spring High School

www.bigspringsd.org
100 Mount Rock Road
Newville, PA 17241
(717) 776-2000

Richard Fry, *Superintendent*
Kevin Roberts, *Assistant Superintendent*
Robyn Euker, *Director of Curriculum & Instruction*

High School

Administration

William August, *Principal*
Charles Smith, *Assistant Principal*
Cory Hoffman, *Dean of Students*

School Counselors

Jocelyn Kraus (776-2429), *Last names A to F, Gifted, and Life Skills*
Sherri Webber-Mains (776-2428), *Last names G to Mi, Emotional Support*
Judy Creps (776-2466), *Last names Mo to Z, ILS*

Middle School

Administration

Dr. Linda C. Wilson, *Principal*
Christopher Boyd, *Assistant Principal*

School Counselors

Anne Fulker, *Gold Team*
Amy Craig, *Maroon Team*

Mount Rock Elementary

Administration

Karen Ward, *Principal*

School Counselor

Susie Ryan, *Counselor*

Oak Flat Elementary

Administration

Stacey Kimble, *Principal*

School Counselor

Danielle Bingaman, *Counselor*

Newville Elementary

Administration

Clarissa Nace, *Principal*

School Counselor

Susie Ryan, *Counselor*

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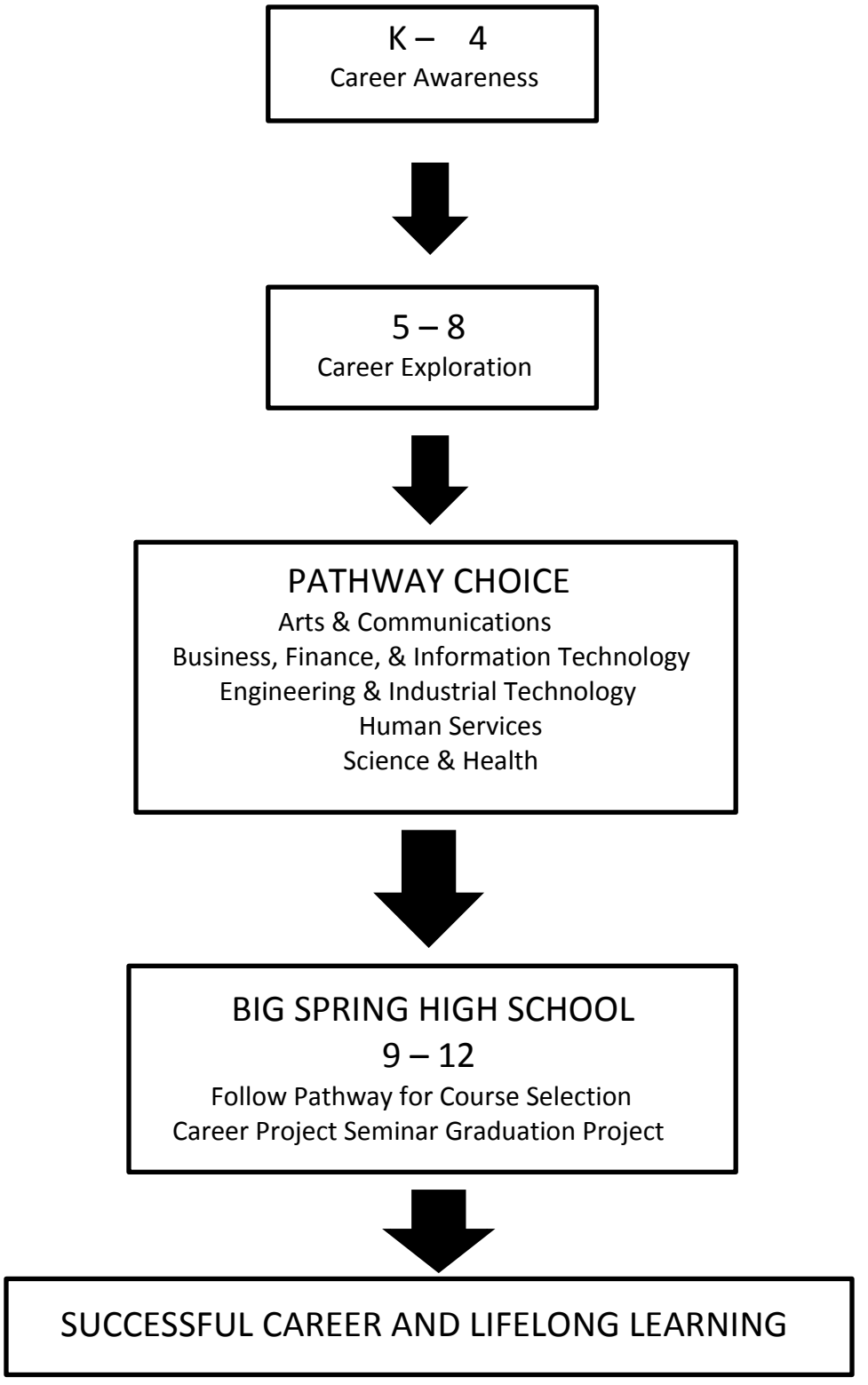
PATHWAYS TO SUCCESS

Big Spring
SCHOOL DISTRICT



Program of Study

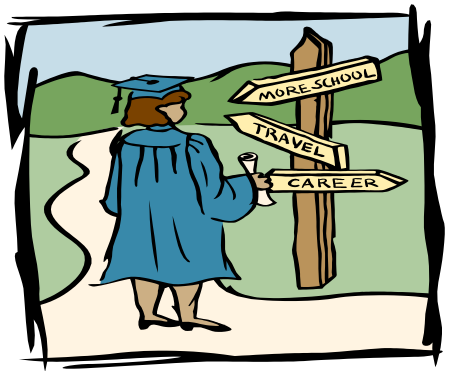
One of the most important choices your child will make while in high school is the type of curriculum to follow. The Program of Studies booklet becomes a valuable tool in making that decision. As parents and students, it is your responsibility to become familiar with the course of study at the high school.

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 work force, 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

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

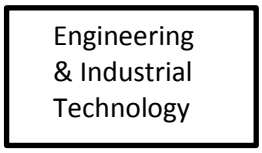
FOCUS AREAS:

- Performing Arts (PA)
- Visual Arts (VA)
- Publishing Arts (PA)

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

FOCUS AREAS:

- Marketing, Sales and Service (MS)
- Finance (F)
- Information Technology (IT)
- Business Management (MT)



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

FOCUS AREAS:

- Engineering and Engineering Technology (ET)
- Construction and Architecture (CT)
- Manufacturing (M)
- Transportation, Distribution and Logistics (TDL)

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

FOCUS AREAS:

- Counseling and Personal Care (CPC
- Education (E)
- Law, Public Safety and Government (LPG)
- Hospitality and Tourism (HT)

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 (HS)
- Agriculture, Food and Natural Resources (AFN)
- Science, Technology and Math (STM)

Graduation Requirements

Students attending Big Spring High School must take a combination of core academic subjects and electives to complete the Department of Education and school district's minimum credit requirements. Academic core subjects are based on the basic skills needed by all students. The Career Pathway determines recommended electives (5 credits minimum) to prepare for a chosen career field. Non-Pathway Electives are those taken outside of their chosen pathway (5 credits minimum). Students work with their counselors, advisors, and parents to develop their programs of study and schedule all classes needed for graduation.

Academic Credits	
English	4
Social Studies	4
Mathematics (Math 12* may be required)	3 (.5)
Science	3
Freshman Seminar	0.5*
Career Project Seminar	0.5
Personal Finance	0.5
Health and Physical Education	2.0
Pathway Electives	5
Non-Pathway Electives	5***
Total Graduation Credit Requirement	28

*Not required for the classes of 2017 and 2018
**Not required for the classes of 2016, 2017, and 2018
***5.5 Non-Pathway Electives for the classes of 2016, 2017, and 2018

Graduation Project

Students will be required to complete a career project to meet the Department of Education graduation project requirement. Students will successfully complete Career Project Seminar and a job shadow to meet the 11th grade requirement.

Proficiency/Remediation Program

Big Spring High School students who have not scored proficient or above on their Keystone Algebra assessment will be required to successfully complete Math 12 during their senior year.

Big Spring High School students who do not score proficient or above on their Keystone Algebra I, Biology, or Literature Keystone examination will be required to successfully complete the Keystone Prep course in preparation for a Keystone assessment retake(s).

Graduation Requirements Starting with the Class of 2019

Big Spring Diploma	Distinguished Big Spring Diploma
❑ 2 English ❑ 2 Social Studies ❑ 2 Science ❑ 2 Math ❑ 2 PE/Health courses ❑ 3 Keystone Exams	❑ 2 English ❑ 2 Social Studies ❑ 2 Science ❑ 2 Math ❑ 2 PE/Health courses ❑ 3 Keystone Exams
❑ 8 Core Credits ❑ Advisement ❑ Personal Finance ❑ 10 Competencies met with core courses or electives ___ Arts and Humanities* ___ Communications* ___ Digital Literacy* ___ Global Studies ___ Lab Science ___ Literature ___ Numerical Analysis ___ Project Based ___ Research Writing ___ Wellness A course may only count toward 1 competency *May be acquired during 9th and 10th grades	❑ 8 Core Credits ❑ Advisement ❑ Personal Finance ❑ 10 Competencies met with core courses or electives ___ Arts and Humanities* ___ Communications* ___ Digital Literacy* ___ Global Studies ___ Lab Science ___ Literature ___ Numerical Analysis ___ Project Based ___ Research Writing ___ Wellness A course may only count toward 1 competency *May be acquired during 9th and 10th grades
	❑ GPA Requirement 3.5 ❑ 2 credits of the same World Language at the High School ❑ 3 Advanced Placement courses ❑ 5 Honors, AP, or Dual Enrollment ❑ Internship, Capstone, Pathways Cert ❑ 150 Citizenship Hours: school related, community related, career related (75 hour max per category)

Differentiated Diploma Course Competencies

(Beginning with the Class of 2019)

Arts and Humanities

Hon Art / Humanities	AP Studio Art	Craft of Acting	AP Music Theory
Sculpture I	Ceramics I	Shakespeare	Concert Band
Sculpture II	Ceramics II	World of Theatre	Concert Choir
Pop Rock & Hip Hop	Design I	French III	Guitar I
Music History	Digital Photography I	Hon Spanish V (2015+)	Guitar II
Music In Film	Digital Photography II	Spanish II	Introduction to Music Theory I
Piano Lab	Draw/Painting I	Commercial/Advertising Art	Jazz Studies
	Drawing & Painting II	Horticulture and Landscaping	

Communications

French I	Adv. FFA Leadership	Computer Information Systems	Spanish I
French II	Mass Media	Graphic Communications	Spanish II
French III	Public Speaking	Health Care Technician	Spanish III
Hon French IV	Green Engineering	Nursing	Hon Spanish IV
	Technology/Impact on Humans	Child Care and Guidance	Hon Spanish V
		Criminal Justice	

Digital Literacy Competency

Intro to Agribusiness - HACC	Commercial/Advertising Art	Green Engineering	French I
Science of Anim Ag	Computer Information Systems	Civil Engineering	French II
Digital Photography I	Graphic Communications	Electronics	French III
Digital Photography II	Logistics and Warehouse Management	Robotics	Hon French IV
Exploring Presentations	Geographic Information Systems	Transportation Engineering	

Global Studies

Spanish III	French III	Geography	
Music History	Military History		

Lab Science

Electronics	Anatomy and Physiology	Carpentry	Cosmetology
Transportation Engineering	AP Chemistry	Electrical and Power Construction & Maintenance	Culinary
AP Environmental Science	Chemistry	Horticulture and Landscaping	Electronics Technology
Food Science and Safety	Honors Chemistry	HVAC	Precision Machine Technology
Honors Animal and Veterinary Science	Honors Physics I	Masonry	Welding
Intro to Ag, Food and Natural Resources	Honors Physics II	Dental Assisting	Auto Collision Technology
Plaint & Greenhouse Science	Microbiology	Health Care Technician	Automotive Technology
		Nursing	Diesel Technology

Literature

Shakespeare	English III Hon		
AP English Literature and Composition	English IV A		
English III A	Hon French V		

Numerical Analysis

Honors Physics II	AP Calculus AB	Geometry	Honors Geometry
AP Physics C: Mechanics	AP Statistics	Geometry II	Honors Pre-Calculus
Electronics Technology	Applications of Trigonometry	Honors Algebra II	Statistics
Precision Machine Tech	Pre-Calculus	Algebra II	Honors Trigonometry

Project Based Learning

Equine Science	AP Studio Art	Event Planning	Culinary
Essential Home Projects	Ceramics I	Retail Management	Dental Assisting
Fish/Wild Mgmt I	Ceramics II	Sports & Entertainment Management	Diesel Technology
Food Science and Safety	Design I	Auto Collision Technology	Electrical and Power Construction & Maintenance
Honors Animal and Veterinary Science	Digital Photography I	Automotive Technology	Electronics Technology
Intro to Ag, Food and Natural Resources	Digital Photography II	Carpentry	Graphic Communications
Intro to Agribusiness - HACC	Draw/Painting I	Child Care and Guidance	Health Care Technician
Living On Your Own	Drawing & Painting II	Commercial/Advertising Art	Horticulture and Landscaping
Science of Anim Ag	Sculpture I	Computer Information Systems	HVAC
Small Animal Science	Sculpture II	Cosmetology	Logistics and Warehouse Management
Welding	Business INCubator	Intro to Drafting	Masonry
Creative Writing	Guitar I	Geographic Information Systems	Nursing
Intro to Film	Guitar II	Architectural Design	Precision Machine Technology
Yearbook	Music Technology Lab	Civil Engineering	Welding
Sports Leadership	Music Technology Lab II	Electronics	Criminal Justice
Technology/Impact on Humans	Wood Tech I	Robotics	
Transportation Engineering	Wood Production	Small Gas Engines	
Engineering Design	Green Engineering	Structural Engineering	

Research Writing

AP English Literature and Composition	English III Hon	Adv. FFA Leadership	
English III A	English IV A		

Wellness

Body Systems/Softball	Mental Health/PE	Social & Family Health	Nursing
Curr. Trends In PE	Nutrition/weight Training	Dental Assisting	Child Care and Guidance
D &A/ Flag FBall	PE/Aquatics/Sport Safety	Health Care Technician	
Driver's ED/DA/PE	PE/Lifesaving	Culinary	
Human sexuality/ Speedball	Personal Fitness		

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.

Recommended Sequence of Courses

9th Grade — 8 Credits Max

Required Core ..... 5.5 Credits

- English ..... 1 Credit
- Math ..... 1 Credit
- Science ..... 1 Credit
- Social Studies ..... 1 Credit
- Health & Physical Education ..... 0.5 Credit

Strongly Recommended Core Course:

- World Languages ..... 1 Credit

Pathway Electives: ..... 1 Credit

Note: 9th graders have not elected a pathway until the end of 9th grade and should take courses matching their interests to explore their possibilities.

Non-Pathway Electives: ..... 1 Credit

Students are encouraged to "try" courses that are of interest.

10th Grade — 8 Credits Max

Required Core ..... 5 Credits

- English II ..... 1 Credit
- Math ..... 1 Credit
- Science ..... 1 Credit
- Social Studies ..... 1 Credit
- Health & Physical Education ..... 0.5 Credit

Strongly Recommended Core Course:

- World Languages ..... 1 Credit

Pathway Electives: ..... 1.5 Credits

The purpose of providing pathway electives in high school is to help students to crystallize an area of focus to help them become career ready. Research has shown that crystallizing before leaving high school translates into greater career success and training/college completion rates.

Non-Pathway Electives: ..... 1.0 Credit

Students are encouraged to "try" courses that are of interest.

Recommended Sequence of Courses

11th Grade (Class of 2017 & 2018) — 8 Credits Max

***Class of 2019 and beyond follows Differentiated Diploma Course Competencies**

Required Core ..... 5 Credits

- English ..... 1 Credit
- Math ..... 1 Credit
- Science ..... 1 Credit
- Social Studies ..... 1 Credit
- Career Project Seminar ..... 0.5 Credit
- Health & Physical Education ..... 0.5 Credit

Strongly Recommended Core Course

- World Languages ..... 1 Credit

Pathway Electives ..... 2 Credits

The purpose of providing pathway electives in high school is to help students to crystallize an area of focus to help them become career ready. Research has shown that crystallizing before leaving high school translates into greater career success and training/college completion rates.

Non-Pathway Electives: ..... 1 Credit

Students are encouraged to "try" courses that are of interest.

12th Grade (Class of 2017 & 2018) — 8 Credits Max

***Class of 2019 and beyond follows Differentiated Diploma Course Competencies**

Required Core ..... 3 Credits

- English ..... 1 Credit
- Social Studies ..... 1 Credit
- Personal Finance ..... 0.5 Credit
- Health & Physical Education ..... 0.5 Credit

Strongly Recommended Core Course:

- Math ..... 1 Credit
- Science ..... 1 Credit
- World Languages ..... 1 Credit

Pathway Electives: ..... 2 Credits

The purpose of providing pathway electives in high school is to help students to crystallize an area of focus to help them become career ready. Research has shown that crystallizing before leaving high school translates into greater career success and training/college completion rates.

Non-Pathway Electives: ..... 2 Credits

Students are encouraged to "try" courses that are of interest.

2016-2017 Course Offerings

AGRICULTURE COURSES

Basic FFA Leadership — Grade: 9-10

Pathways: SH, BFIT, HS | 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 student may take the course.

Equine Science (Horses) — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: This course is an intensive 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, classifications 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 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.

Essential Home Projects — Grade: 9-12

Pathways: EIT, HS | Credit: .5 | Prerequisite: Living on Your Own

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, then this is the course for you. The course will study the principles and practices dealing with land surveying, flooring, concrete/masonry, rafter/pole buildings, and the creation of biodiesel. This course is designed as a hands-on course where majority of the 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 $4.00.

Fish and Wildlife Management — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: This course covers four areas in the wildlife field: Conservation, Wildlife, Habitats, and Management. The students will study various Pennsylvania species that affect our environment, and some of these species will include whitetail deer, black bear, reptiles/amphibians, birds of prey, and more. Throughout the course, the 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.

Introduction to Agriculture, Food and Natural Resources — Grade: 9-12

Pathways: SH, EIT, HS | Credit: 1 | Prerequisite: None

Description: This course is designed to introduce students to the world of agriculture, the pathways they may pursue and the science and technologies utilized to provide a safe, sustainable and sufficient food supply for the world. Experiences in this class will involve communications, plants, animals, natural resources and basic mechanics. Throughout these lessons, students will learn to solve problems, conduct research, analyze data, work in teams and take responsibility for their learning. This course also includes basic science laboratory exercises, career exploration, and the study of current agricultural events in the news.

Living on Your Own — Grade: 9-12

Pathways: EIT, HS | Credit: .5 | Prerequisite: None

Description: It is important for all students to be able to check the fluids and tire pressure in a vehicle, 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 $4.00.

Small Animal Science — Grade: 9-12

Pathways: SH | 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. Guinea pigs, hamsters, rabbits, and fish may be raised and observed in the classroom. 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.

Supervised Agriculture Experience (Record Book) — Grade: 9-12

Pathways: SH, BFIT | Credit: 1 | 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 collected 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.

Food Science and Safety — Grade: 10-12

Pathways: SH, HS | Credit: 1 | 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 environmental design will be highlighted as students develop and conduct industry-based investigations.
Special Notations: This course will have a required lab fee of $5.00.

Science of Animal Agriculture — Grade: 10-12

Pathways: SH | 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, pork quality assurance, beef quality assurance, introduction to the dairy industry, and dairy herd management. Students will have the opportunity to earn industry certification in pork quality, beef quality, and dairy excellence. This course may be formatted in a manner that requires students to engage in independent learning.

Small Gas Engines — Grade: 10-12

Pathways: EIT, SH | 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 2016-2017 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.

Welding — Grade: 10-12

Pathways: EIT | 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 Notations: This course will have a required lab fee of $5.00

Advanced FFA Leadership — Grade: 11-12

Pathways: SH, BFIT, HS | 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 and participate in an interview. The class will also read a leadership development book and complete proficiency and degree applications. 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 grade.
Special Notations: Students in this course are HIGHLY RECOMMENDED to be FFA members. This course is required for Junior and Senior FFA officers, but any FFA member may take the course. Basic FFA Leadership is a RECOMMENDED prerequisite for this course.

AP Environmental Science — Grade: 10-12

Pathways: SH | Credit: 1 | Prerequisites: Algebra I 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 small 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: Students enrolled in AP courses take the AP Exam as outlined in the student handbook. AP Environmental Science is weighted for cumulative GPA calculation, see p. 64.

Plant and Greenhouse Science—Science Credit — Grade: 10-12

Pathways: SH | Credit: 1 | 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 and vegetable plants in the greenhouse to grow and sell. 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.

Introduction to Agribusiness (HACC) — Grade: 11-12

Pathways: SH, BFIT | Credit: 1 (3 College Credits) | Prerequisite: None

Description: This course includes a comparison of business types, organizations, planning and operations, and inputs and outputs. There is also an examination of agribusiness involved with post-production processing of agricultural products. Students in this course will participate in case studies, interact with business and community leaders, analyze business practices of the agricultural industry and complete an agribusiness and marketing simulation.
Special Notations: This course is a dual enrollment course taught at Big Spring, and participating students may earn 3 college credits through the Harrisburg Area Community College. All students must pay the additional fees in order to earn the college credits. This course is weighted for cumulative GPA calculation, see p. 64. See your counselor or Mrs. Nailor for more information regarding this course. This course fulfills the graduation requirement of Personal Finance for seniors.

Honors Animal and Veterinary Science — Grade: 10-12

Pathways: SH | Credit: 1 | Prerequisite: Biology

Description: This course is designed to provide an in depth look at large animal species. The course will review basic cell biology, cellular functions, protein synthesis and cellular division. In addition, students will engage in extensive studies of anatomy, physiology, nutrition, epidemiology and basic surgical principles and practices. Laboratory work, including dissections, will be an important part of this course. This course is science-based and designed to prepare students for careers in Veterinary and Animal Sciences.
Special Notations: This course is weighted 1.05 for cumulative GPA calculation. This course will also count as one high school science credit. This course will have a required lab fee of $5.00.

TECHNOLOGY AND ENGINEERING COURSES

Architectural Design — Grade: 9-12

Pathways: EIT | 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 a set of floor plans created with AutoDesk's Revit Architecture software package, the most common software used in the architecture field.
Special Notations: These floor plans can be used in a college application portfolio for prospective architecture students.

Introduction to Drafting — Grade: 9-12

Pathways: EIT | 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, as well as the correct symbology 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 mechanical drawings such as multi-view, isometric, and section drawings.

Civil Engineering — Grade: 10-12

Pathways: EIT | Credit: .5 | Prerequisite: None

Description: This course will provide an in depth knowledge of civil engineering and its related fields through many hands-on projects. The projects include surveying, bridge design and construction, and tower design and construction. Students will also use AutoCAD Civil 3D to design drawings and plans for the projects.

Electronics — Grade: 10-12

Pathways: EIT | Credit: 1 | Prerequisite: None

Description: This course is designed for beginning students who are interested in careers related to the design, production, analysis, repair, and operation of devices that use electronics. This course is designed around individual and class. Students will study the theory and operation of how the basic components function, how a variety circuits are connected, and how to design these circuits. Technology Student Association (TSA) activities can be incorporated throughout instructional strategies developed for the course.
Special Notations: Students will have the opportunity to purchase an electronics project kit. Costs range from $10 and up.

Engineering Design — Grade: 10-12

Pathways: EIT | Credit: 1 | Prerequisite: Introduction to Drafting

Description: This course will allow students to have a greater understanding dealing with the overall design process and how engineering plays a fundamental role in drafting communications. This class will allow students to continue working with advanced features of AutoCAD and introduce 3d modeling and design with AutoDesk's Inventor software package. Students will also apply their drawing knowledge to prototypes and various other hands-on problem solving projects.

Special Notations: $5 Lab Fee

Green Engineering — Grade: 10-12

Pathways: EIT | Credit: .5 | Prerequisite: None

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

Special Notations: $10 Lab Fee

Robotics — Grade: 10-12

Pathways: EIT | Credit: 1 | Prerequisite: None

Description: No prior robotics experience is required; beginners are able to advance sequentially through the units gradually to increase their knowledge and skill level. This project-based course teaches the design process in an engaging, hands-on manner in which students will design, build, and program robots. Students will quickly understand the relevance of what they are learning and master the fundamentals of the engineering design process Autodesk Inventor software, the VEX Robotics Design System, and ROBOT-C programming software. The curriculum is created to ensure that students with varying learning styles and levels can accomplish lesson goals.

Structural Design — Grade: 10-12

Pathways: EIT | 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 Notations: $10 Lab Fee

Technology and Its Impacts — Grade: 9-12

Pathways: EIT | Credit: .5 | Prerequisite: None

Description: A survey course of technology designed to help students identify and analyze the development of technology and its impact on humans. Students will develop a realization of the importance of human technological behavior as it relates to their environment, their social/cultural systems and their future. Students will apply their knowledge on several hands-on and design based projects throughout the course.

Transportation Engineering — Grade: 10-12

Pathways: EIT | 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

Honors Technology Education Capstone Course — Grade: 11-12

Pathways: EIT | Credit: 1 | 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 about and taking your understanding of it to a new and challenging level.

Wood Technology — Grade: 9-12

Pathways: EIT | 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 Notations: Cost per student for materials used in required projects is $18.00-$30.00.

Wood Production — Grade: 10-12

Pathways: EIT | Credit: .5 | Prerequisite: Wood Technology

Description: This is an advanced course that provides students with experience in mass production. Students will form an organization and design wood products, plan and practice construction of products, and successfully complete a mass production of the products. Emphasis will be placed on appropriate product design, efficient construction techniques, product quality control, product marketing, workplace safety management, co-worker communication and management, teamwork, and achieving a high quality end result. Students will pay for materials used with profit generated from product sales to school staff.

A R T

Ceramics I — Grade: 9-12

Pathways: AC | Credit: .5 Credit | Prerequisites: 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 become familiar with the firing process and be introduced to glazing.
Special Notations: Prerequisite course for Ceramics II

Ceramics II — Grade: 10-12

Pathways: AC | Credit: 1 Credit | Prerequisites: "C" average or higher in Ceramics I

Description: Students who enjoyed working with clay in Ceramics I will continue working with hand-building techniques. In addition, students will also learn to throw pottery on a potter's wheel. By the end of the course students will be combining hand-building and thrown techniques to create pieces.

Digital Photography I — Grade: 9-12

Pathways: AC | Credit: .5 Credit | Prerequisites: 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.
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.

Digital Photography II — Grade: 10-12

Pathways: AC | Credit: 1 Credit | Prerequisites: "C" average or higher in Digital Photography I

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.
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.

Drawing & Painting I — Grade: 9-11

Pathways: AC | 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. $10 studio fee for the course

Drawing & Painting II — Grade: 10-12

Pathways: AC | Credit: 1 Credit | Prerequisites: "C" average or higher in Drawing & Painting I

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. $15 studio fee for the course

Honors Drawing and Painting III — Grade 11-12

Pathways: AC | Credit: 1 Credit | Prerequisites: "B" average or higher in Drawing and Painting II

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: This course is weighted 1.05 for cumulative GPA calculation. Prerequisite course for AP Studio Art. $25 studio fee for the course

AP Studio Art (Level IV Drawing and Painting) — Grade: 11-12

Pathways: AC | Credit: 1 Credit | Prerequisites: "B" average, or higher, in Honors Drawing & Painting

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. The portfolio will be divided into three areas: Quality, Concentration, and Breadth. The pieces for the portfolio will come from AP Studio, Drawing & Painting I, Drawing & Painting II, Honors Drawing and Painting III. You will be working independently under Art Department advisement to develop work for the Concentration section of the portfolio.
Special Notations: Offered fall Semester only; Students enrolled in AP courses take the AP exam as outlined in the student handbook. AP Studio Art is weighted for cumulative GPA calculation, see page 64. 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.

Honors Art Humanities — Grade: 11-12

Pathways: AC | Credit: 1 Credit | Prerequisite: "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.
Special Notations: This course is weighed 1.05 for cumulative GPA calculation.

Sculpture I — Grade: 10-12

Pathways: AC | Credit: 1 Credit | 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 Notations: Prerequisite course for Sculpture II

Sculpture II — Grade: 11-12

Pathways: AC | Credit: 1 Credit | Prerequisites: "C" average or higher in Sculpture I

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 opportunity to hone observation skills with an emphasis on proportion, composition, and creative problem solving.

BUSINESS EDUCATION

ELEVENTH GRADE

Career Project Seminar

TWELFTH GRADE

Personal Finance

Career Project Seminar — Grade: 11

Pathways: All | 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. In order to pass the course, students must complete all components of the class satisfactorily.
Special Notations: This is a graduation requirement.

Personal Finance — Grade: 12

Pathways: All | 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 Notations: This course is a graduation requirement.

Exploring Presentations — Grades: 9-12

Pathways: All | 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 2010, as well as Prezi and Google Presentation software. Emphasis will be placed on creating eye-catching presentations and learning how to properly present to an audience.

Event Planning — Grades: 9-12

Pathways: AC, BFIT | 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. Desktop publishing will be used to create media using Microsoft Publisher.

Future Business Leadership — Grades: 9-12

Pathways: BFIT | Credit: 1 | Prerequisite: None

Description: Students will develop skills in leadership development with an emphasis in business. They will compete in the Business Plan Challenge, the Entrepreneur Challenge, and FBLA (Future Business Leaders of America) competitions at the individual, state, and national levels for scholarship opportunities. Students will have the opportunity to network and work with business professionals.
Special Notations: Students enrolled in this course must be a member of FBLA, which requires paying dues of approximately $26.

Marketing and Advertising — Grades: 9 -12

Pathways: AC, BFIT, HS | Credit: .5 | Prerequisite: None

Description: This course will introduce students to basic marketing terminology and concepts with emphasis to 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.

Retail Management — Grades: 9-12

Pathways: BFIT, AC, HS | 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.

Sports and Entertainment Management — Grades: 9-12

Pathways: BFIT, EIT | 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.

Video Game Design I — Grades: 9-12

Pathways: BFIT, EIT | Credit: .5 | Prerequisite: None

Description: Do you wonder how your favorite video games were built? Do you have a great idea for an original video game? Join us to learn how to use video game industry tools, techniques, and styles in computer game development. Activities include designing and developing original computer games. We will also explore further training and employment in the professional field of computer game design.

Video Game Design II — Grades: 9-12

Pathways: BFIT, EIT | Credit: .5 | Prerequisite: Successful completion of Video Game Design I

Description: In Video Game Design II the next step in developing games, the world of 3-D gaming is explored and mastered. The software of GameMaker and Blender will be put to the test as you develop games that excite the user and push your skills to a higher level. Don't let this chance pass you by as you create 3-D games that blow your mind. Prerequisite to this class is successfully completing Video Game Design.

Web Page Design — Grades: 9 -12

Pathways: AC, BFIT | Credit: .5 | Prerequisite: None

Description: This course will use Hypertext Markup Language (HTML) to create web page design elements. Topics such as creating pages, formatting pages and text, creating links, tables and lists, and adding multimedia and graphics will be covered.

Leadership Development — Grade: 9-12

Pathways: AC | 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.

Business INCubator — Grades: 10-11

Pathways: BFIT, EIT, HS, AC | Credit: 1 | 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 Pitch Week. Pitch Week helps to further fire the entrepreneurial spirit by putting 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 weighted 1.05 for cumulative GPA calculation.

Accounting I (HACC) — Grades: 10-12

Pathways: BFIT, HS | Credit: 1 (4 College Credits) | 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. Student 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. All students must pay the additional fees in order to earn the college credits. This course is weighted for cumulative GPA calculation, see p. 64. See your counselor or Mrs. Munson for more information regarding this course.

Accounting II — Grades: 10-12

Pathways: BFIT, HS | 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.

Work Experience — Grades: 11-12

Pathways: All | Credit: Based on duration of placement | Prerequisite: None

Description: This program is a supervised, paid occupational experience at a school-approved work site. The students perform duties related to their acquired skills with the opportunity to develop additional competencies. Students are required to submit a weekly journal entry highlighting their experiences.

Career Internship — Grades: 11-12

Pathways: All | Credit: Based on duration of placement | Prerequisite: None

Description: This program is a supervised, paid or non-paid occupational experience at a school-approved work site. Students are required to submit a weekly journal entry highlighting their experiences. Each quarter, a career project or multimedia presentation is required for the final exam.

Special Notations: Two teacher recommendations are required.

ENGLISH

NINTH GRADE

Reading I/English I
Academic English I
Honors English I

TENTH GRADE

Academic English II
Honors English II

ELEVENTH GRADE

Academic English III
Honors English III
AP Language & Composition

TWELFTH GRADE

Academic English IV
Honors English Seminar (Veritas)
AP English Literature & Composition

Reading I — Grade: 9

Pathways: AC | Credit: 1 | Prerequisite: None

Description: This is a college preparatory course limited to students who have been hand-picked based upon special recommendation from language arts teachers and students' performance on the MAPS and the PSSA. Students will read self-selected books that are adapted to their abilities and interests. Whole class readings will be used to help students master the literary concepts on the Keystone Exam. Additionally, students will make use of the Read 180 computer system for individualized help with their reading.

Special Notations: This class will be scheduled the first semester, followed by English I the second semester.

Academic English I — Grade: 9

Pathways: AC | Credit: 1 | Prerequisite: None

Description: This course will focus on preparing students to read and write on an academic level. Students will read and analyze major works of literature including short fiction, drama, and poetry from the textbook and selected classic novels and plays. Students may also be given the option to choose some of their own reading. Students will write persuasively, informatively, and creatively in addition to writing a research paper. Vocabulary and grammar exercises will be included as well.

Special Notations: English I Academic, II, III and IV are sequential.

Honors English I — Grade: 9

Pathways: AC | Credit: 1 | Prerequisite: None

Description: This course will focus on preparing students to read and write on an honors level. Students will read and analyze major works of literature including short fiction, drama, and poetry from the textbook and selected classic novels and plays. 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 writing a research paper. Vocabulary and grammar exercises will be included as well.

Special Notations: The Honors English section is designed for students who have demonstrated superior communication skills and have attained a B average or above in prior academic English courses and have the recommendation of an English teacher. 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 required. Honors English is weighted at 1.05 for cumulative GPA calculation. English I Academic, II, III and IV are sequential.

Academic English II — Grade: 10

Pathways: AC | Credit: 1 | Prerequisite: English I A

Description: Through literature, the elements of fiction are studied intensively; short stories, novels, poetry, dramas, and essays are read and discussed. Students are expected to become involved in discussions and to challenge the ideas of others. A research paper is a requirement of this course. A vocabulary unit will be integrated throughout this course as well. Literature is a key focus for this class as we prepare students to take the state Keystone Exam.
Special Notations: English I Academic, II, III and IV are sequential.

Honors English II — Grade: 10

Pathways: AC | Credit: 1 | Prerequisite: English I A or Honors English I

Description: Through literature, the elements of fiction are studied intensively; short stories, novels, poetry, dramas, and essays are read and discussed. Students are expected to become involved in discussions and to challenge the ideas of others. A research paper is a requirement of this course. A vocabulary unit will be integrated throughout this course as well. Literature is a key focus for this class as we prepare students to take the state Keystone Exam.
Special Notations: The Honors English section is designed for students who have demonstrated superior communication skills and have attained a B average or above in prior academic English courses and have the recommendation of an English teacher. 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 required. Honors English is weighted at 1.05 for cumulative GPA calculation. English I Academic, II, III and IV are sequential.

Academic English III — Grade: 11

Pathways: AC | Credit: 1 | Prerequisite: English II A

Description: Students will examine American literature through reading novels, short stories, plays, poems, and nonfiction works that reflect the cultural and intellectual history of America. In composition, students will analyze literary selections and complete a persuasive research paper. Vocabulary growth is encouraged through all writing, speaking, and literature studies and there is a vocabulary unit integrated throughout this course. Class discussions and compositions will encourage analysis, application, synthesis, and evaluative levels of thinking.
Special Notations: English I Academic, II, III and IV are sequential.

Honors English III — Grade: 11

Pathways: AC | Credit: 1 | Prerequisite: English II A or Honors English II

Description: Students will examine American literature through reading novels, short stories, plays, poems, and nonfiction works that reflect the cultural and intellectual history of America. In composition, students will analyze literary selections and complete a persuasive research paper. Vocabulary growth is encouraged through all writing, speaking, and literature studies and a vocabulary unit is integrated throughout this course. Class discussions and compositions will encourage analysis, application, synthesis, and evaluative levels of thinking.
Special Notations: The Honors English section is designed for students who have demonstrated superior communication skills and have attained a B average or above in prior academic English courses and have the recommendation of an English teacher. 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, a research paper, and other enrichment activities are required. Honors English is weighted at 1.05 for cumulative GPA calculation. English I Academic, II, III and IV are sequential.

Advanced Placement Language and Composition — Grade: 11

Pathways: AC | Credit: 1 | Prerequisite: English II A 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 analytic and 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 the rhetorical elements and their effects in non-fiction texts from various disciplines and historical periods.
Special Notations: Students enrolled in AP courses take the AP exam as outlined in the student handbook. AP Language and Composition is weighted for cumulative GPA calculation; see p. 64.

Academic English IV — Grade: 12

Pathways: AC | Credit: 1 | Prerequisite: English III A or Honors English III

Description: Senior academic students are expected to move to a more complex level of thinking, reading, writing, and discussing with a focus on textual analysis. The literature studied in the senior year includes a survey of British literature from the Anglo Saxons to the twentieth century. This will be supported with genre studies in drama, poetry, and the novel. Students will be expected to write frequently both in and out of class about themselves, the literature they read, and their reactions to it. Students will be expected to develop ideas in increasing depth and stylistic maturity using rhetorical structures appropriate to their purpose and audience and will write a formal research paper and a personal memoir. Vocabulary growth, as well as structural and usage correctness, will be stressed through writing, reading, and speech.

Special Notations: English I Academic, II, III and IV are sequential.

Honors English Seminar (Veritas) — Grade: 12

Pathways: AC | Credit: 1 | Prerequisite: English III A or Honors English III

Description: In this project-based course, students will be able to select a focus of study and complete an in-depth exploration of the selected topic, similar to upper-level seminar courses offered in many English programs at universities. At the beginning of the class, students will select themes and concepts they are interested in exploring through fiction and nonfiction texts that will be identified by the students. Throughout the course, students will read and analyze these texts in order to determine how their understanding of the issue is broadened or altered by considering the ideas presented in each text. By the end of the course, students will create a multi-faceted project related to the concepts they chose to explore.

Special Notations: Students interested in taking this course must be capable of working independently and collaboratively, as well as managing their time well. Students will be expected to address reading, writing, and research assignments thoroughly and quickly. Students are also expected to locate their own texts for the course by either purchasing them or requesting them through the library system. This course is weighted at .5 for cumulative GPA calculation.

Advanced Placement English Literature & Composition — Grade: 12

Pathways: AC | Credit: 1 | Prerequisite: English III A or Honors English III

Description: Through this course, 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. Parts of this course may be taught by a variety of department members. Students will be expected to take the AP Exam in May. Success on this exam may result in advanced college credit, placement, or both.

Special Notations: Students enrolled in AP courses take the AP Exam as outlined in the student handbook. AP English is weighted for cumulative GPA calculation, see p. 64.

ENGLISH ELECTIVES

Creative Writing — Grade: 9-12

Pathways: AC | Credit: .5 | 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.

Introduction to Film — Grade: 9-10

Pathways: AC | Credit: .5 | 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.

SAT Prep — Grade: 11

Pathways: All | Credit: .5 | Prerequisite: None

Description: This course is designed to prepare students to take the SAT college entrance exam. The course will cover the content which will be assessed on the exam, and will also address test-taking skills and strategies for taking the SAT in particular. Students will be taught by both a math teacher and an English teacher at different times throughout the course. Students should plan to take the SAT exam as close to the end of this course as possible.

Shakespeare — Grade: 9-12

Pathways: AC | Credit: .5 | Prerequisite: None

Description: Students will study works by Shakespeare. In addition, students will act out scenes from the plays read in class. Emphasis will be on personal interpretation of the plays.

Mass Media — Grade: 10-12

Pathways: AC | Credit: 1 | Prerequisites: Recommendations from teachers

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, will develop communication and critical thinking skills in order to produce the daily Channel 3 update and an online school publication. Requirements include projects such as public service announcements, feature stories, and news stories. Topics to be addressed include the ethics of journalism, as well as freedom of speech and of the press. Students who apply will be accepted based on teacher recommendations.

Advanced Mass Media — Grade: 10-12

Pathways: AC | Credit: 1 | Prerequisites: Recommendations from teachers, Mass Media

Description: Building on the Mass Media course, Advanced Mass Media will take charge of the production aspect of Channel 3 News. Students may be responsible for creating video feature stories, intros, commercials, and educational tutorials that will air on Channel 3 and appear on the Paw Print website. They will also be responsible for filming school events such as pep rallies, concerts, and other special events. When time permits, students will study the art of on-air performance, news photography, and various video editing software. Studentswho apply will be accepted based on teacher recommendations, and the class is limited to 8 students or less.

Public Speaking — Grade: 9-12

Pathways: AC | Credit: .5 | 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.

World of Theater — Grade: 9-12

Pathways: AC | Credit: .5 | 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.

Craft of Acting — Grade: 10-12

Pathways: AC | Credit: .5 | Prerequisite: None

Description: This course is ideal for creative, expressive, cooperative students who are dedicated to becoming more accomplished actors. Students will study the techniques an actor uses to communicate a character. Most assessments will be performance based as students will work in groups to direct, produce, and perform scenes that showcase the skills discussed in the course. Responsibility and willingness to cooperate within a group are essential. Though performance comprises the bulk of the class, critical and reflective writings will also be completed to assist students in becoming more insightful actors. In discussing the actor's craft, students will study a variety of theatre styles and concepts including (but not limited to) monologue, Shakespeare, and modern drama.

Yearbook — Grades: 9-12

Pathways: AC, BFIT | Credit: 1 | Prerequisite: None

Description: The students will learn to plan and design a yearbook while adapting their writing skills to the yearbook format. Interest in writing, publishing, designing, and school activities is essential.

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

HEALTH AND PHYSICAL EDUCATION

Health and Physical Education — Grade: 9-12

Pathways: All | Credit: .5 Each Year | Prerequisites: None

Description: Each student must take a Health and Physical Education class **each year** grades 9-12 and **earn two credits in order to graduate**. Health and Physical Education is a combined course in which students will be placed into one of eight classes. A student may not repeat a class they have successfully completed.

Physical Education

Description: The program is designed to encourage students to develop an appreciation for the benefits of exercise on a regular basis as part of a personal and health-related fitness plan. Students receive instruction and participate in a variety of team and lifetime activities. Through their involvement in these activities, students have the opportunity to develop interpersonal skills needed for cooperation, team play, sportsmanship, and a higher level of sports proficiency and fitness program knowledge. ***Please note: The physical education pairings listed below are subject to change.***

Health Education

Description: Eleven separate but interrelated topics comprise the Health portion of these courses:

Body Systems and Related Diseases/Disorders — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: **Body Systems and Related Diseases/Disorders** is an in-depth study of the communicable and noncommunicable diseases that affect the human body. The focus is on the recognition of the warning signs, treatments, and prevention of diseases. This is paired with **Physical Education activities Softball and STX Lacrosse**

Chemical and Substance Abuse — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: Topics to be studied include understanding medicines, tobacco use and cessation, alcohol, illegal drugs, strategies for preventing substance abuse, recovering from addiction and codependency, refusal skills, and decision-making skills. This is paired with the **Physical Education component is high intensity strength training and Frisbee games.**

Current Trends in Fitness — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: **Current Trends in Fitness** students will actively participate in an exercise program and other physical activities that incorporate a variety of modern trends in the fitness world. The student will also become aware of dietary concerns and track and modify personal eating habits according to their goals. This is paired with **Physical Education activities that may include Mountain Biking, Team Games, Geocaching, and the Fitness Center.**

Exercise, Nutrition and Weight Control — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: Topics to be discussed include resistance training, goal setting, decision making, physical fitness and one's health, physical activity for life, nutrition, managing one's weight, diets, and eating disorders. This is paired with the **Physical Education component and includes high intensity strength training, Ultimate Frisbee, and full court Engle-ball.**

Human Sexuality — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: **Human Sexuality** studies concentrate on relationships with others, positive communication skills, dating, contraception, and prevention of sexually transmitted diseases (including AIDS). This is paired with **Physical Education activities that may include Backyard Games, Speedball, Table Tennis, and/or Golf. Additionally, some time will be spent in the Fitness Center.**

Mental Health — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: **Mental Health** emphasizes the importance of strong mental/emotional health and demonstrates its interrelationship to all other health areas, especially drug use, sexuality, and stress-related diseases. Stress reduction strategies are presented. This is paired with **Physical Education activities that may include Table Tennis, Speedball, Pickleball, and/or Backyard Games. Additionally, some time will be spent in the Fitness Center.**

Personal Fitness — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: Students will participate in 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, disease prevention, and weight management. The student will be exposed to a variety of exercises and activities that provide physical, social, and emotional benefits that can be useful throughout the aging process.

Safety and Driver's Education — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: **Safety Education** will encompass tips, background information, history, and resources on various safety topics. Topics include heat/cold, emergencies, carbon monoxide dangers, and fire safety among others. The driver education component will discuss the laws and regulations, defensive driving skills, road safety, the use of vehicles, and how to become a responsible driver. This is paired with **Physical Education activities that may include the Fitness Center, Ultimate Frisbee, Angleball, Speedball, and Team Handball.**

Social and Family Health/Parenting — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: **Social and Family Health/Parenting** provides strategies useful to developing strong relationships with family members and others. Parenting skills are also addressed as well as goal setting, decision making and refusal skill strategies. This is paired with **Physical Education activities Volleyball and Basketball**.

Sports Safety and Aquatics — Grade: 9-12

Pathways: SH | Credit: .5 | Prerequisite: None

Description: **Sport Safety and Aquatics** provides students with background and safety information about a variety of sports and methods on how to prevent sports injuries in these activities. It is a research based class designed to facilitate the exploration of various lifelong sports/activities and foster a working knowledge of the skills and equipment needed to be an active participant. This is paired with **Physical Education activities related to Aquatics**.

HEALTH AND PHYSICAL EDUCATION ELECTIVES

Lifeguard Training — Grade: 10-12

Pathways: SH, HS | Credit: .5 | Prerequisites: 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. (This course may be used as a Health/Physical Education credit.)

Elementary Water Safety — Grade: 10-12

Pathways: SH, HS | 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.

Sports Medicine — Grade: 10-12

Pathways: SH | Credit: .5 | Prerequisite: See Special Notations

Description: This course provides an overview of the role of a certified athletic trainer in the high school setting. Students will be instructed in basic anatomy, physiology and kinesiology as they relate to athletic injuries and basic first aid. This course does not meet the criteria for a health and physical education credit.
Special Notations: Pre-approval by two Health and Physical Education teachers obtained by signatures before scheduling. Students may need to purchase textbook materials—approximate cost $35.00.

Sport Leadership — Grade: 11-12

Pathways: SH | Credit: .5 | Prerequisite: See Special Notations

Description: This course is designed for the student who may have an interest in a career field related to exercise, sport, or physical activity (Ex. Health and Physical Educator, Sport Psychologist, Athletic Coach, Recreation Director, Fitness Instructor, Sports Agent, etc.). This course encompasses such areas as personal and/or team training, designing and teaching a skill session, game creation and modification, coaching, officiating, sports management, and recreational event planning. It is an elective 9-week course that meets daily. This course does not meet the criteria for a health and physical education credit. It is available only to Juniors & Seniors.
Special Notations: Pre-approval by two Health and Physical Education teachers obtained by signatures before scheduling. Minor costs are possible.

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.

French I/Spanish I: Introductory Level — Grade: 9-12

Pathways: All | Credit: 1 | Prerequisites: See Special Notations

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 Notations: A grade of C or better in most recent English class is recommended for entry into the language studies program.

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

Pathways: All | Credit: 1 | Prerequisites: French I/Spanish I See Special Notations

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 and major unit on
Art: French: Monet & the Impressionists/Spanish: Velásquez, Goya, Picasso, and more!
Special Notations: A grade of C or better in Level I is recommended for advancement to Level II.

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

Pathways: All | Credit: 1 | Prerequisites: French II/Spanish II See Special Notations

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.
French III students build 3-D mini-replicas of monuments in France that they intend to visit in the future. Students study legendary figures of French history such as Charlemagne, Joan of Arc, The Sun King: Louis XIV, and Marie Antoinette.
Special Notations: A grade of C or better in Level II is strongly recommended for advancement to Level III.

Honors French IV/Honors Spanish IV — Grade: 10- 12

Pathways: All | Credit: 1 | Prerequisite: Spanish III—See Special Notations

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 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 Notations: A grade of B or better in Level III is strongly recommended for advancement to Honors Level IV. This course is weighted at 1.05 for cumulative GPA calculation.

Honors Spanish V — Grade: 11-12

Pathways: All | Credit: 1 | Prerequisite: Spanish IV See Special Notations

Honors Level V is the most advanced language course level of Spanish.

Description: The students in Honors Spanish V will comprehend formal and informal spoken Spanish, acquire vocabulary and a grasp of structure to allow the easy, accurate reading of newspaper and magazine articles, as well as of modern literature in Spanish, compose various types of written passages and express ideas orally with accuracy and fluency. The four language skills of listening, reading, speaking and writing will be developed and integrated daily in all classroom activities in Spanish.
Special Notations: A grade of B or better in Level IV is strongly recommended to advance to Level V. This course is weighted at 1.05 for cumulative GPA calculation.

MATHEMATICS

NINTH GRADE

Pre-Algebra
Algebra I Part 1/Part 2
Algebra I
Geometry
Honors Geometry

TENTH GRADE

Algebra I
Geometry
Honors Geometry
Algebra II
Honors Algebra II
Pre-Calculus
Honors Pre-Calculus

ELEVENTH GRADE

Geometry
Geometry II
Algebra II
Honors Algebra II
Honors Trigonometry
Pre-Calculus
Honors Pre-Calculus
AP Calculus AB
AP Statistics

TWELFTH GRADE

Geometry
Geometry II
Algebra II
Honors Algebra II
Applications of Trigonometry
Honors Trigonometry
Pre-Calculus
Honors Pre-Calculus
Statistics
AP Statistics
AP Calculus AB
AP Calculus BC

Pre-Algebra — Grade: 9

Pathways: All | Credit: 1 | Prerequisites: 8th grade Teacher or High School Administrator Recommendation

Description: In this course, we will explore mathematical concepts that are foundational for success in algebra including algebraic expressions, integers, square roots, decimals, fractions, ratios, proportions, percent, area, volume, statistics, and probability.
Special notation: Students are required to provide their own scientific calculator.

Algebra I Part 1 — Grade: 9

Pathways: All | Credit: 1 | Prerequisites: 8th grade Teacher or High School Administrator Recommendation

Description: This semester course will review fundamental math skills and introduce students to the foundations of algebra including equations, inequalities, and real world applications.
Special notation: Successful completion of Algebra I Part 1 results in one elective credit. Students are required to provide their own scientific calculator.

Algebra I Part 2 — Grade: 9

Pathways: All | Credit: 1 | Prerequisites: Algebra I Part I or Teacher/ Administrator Recommendation

Description: This semester course will further examine fundamental Algebra through the study of linear functions, exponent properties, and polynomials.
Special notation: Successful completion of Algebra I Part 2 results in one math credit. Students are required to provide their own scientific calculator.

Algebra I — Recommended Grade: 9

Pathways: All | Credit: 1 | Prerequisite: 8th Grade Teacher Recommendation

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.
Special Notation: Students are required to provide their own scientific calculator.

Geometry — Grade: 9-10

Pathways: All | Credit: 1 | Prerequisites: Algebra I and 8th Grade Teacher Recommendation

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.
Students are required to provide their own scientific calculator.

Honors Geometry — Grade: 9-10

Pathways: All | Credit: 1 | Prerequisites: Algebra I and Teacher Recommendation

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 course.
Special Notations: "B" average or higher in Algebra I. This course is weighted 1.05 for cumulative GPA calculation. Students are required to provide their own scientific calculator.

Geometry II — Grade: 10-12

Pathways: All | Credit: 1 | Prerequisites: Algebra I and Geometry

Description: This course is designed to take a deeper look at the concepts covered in Geometry and the mathematicians behind the formulas, then will look at art, architecture, and the world around us, from a Geometric standpoint. While it may not replace Algebra II for college-bound students, it may act as an intermediate step between Geometry and Algebra II for those concerned about their ability to successfully complete Algebra II, or as a step into either the ½ credit Trigonometry or ½ credit Statistics class.

Algebra II — Grade: 10-12

Pathways: All | Credit: 1 | 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, multi-variable 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.

Honors Algebra II — Recommended Grade: 10-11

Pathways: All | Credit: 1 | Prerequisites: Geometry and teacher recommendation

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 course.
Special Notations: "B" average or higher in Geometry. This course is weighted 1.05 for cumulative GPA calculation.

Pre-Calculus — Grade: 11-12

Pathways: All | Credit: 1 | 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.

Honors Pre-Calculus — Grade: 10-12

Pathways: All | Credit: 1 | Prerequisites: "B" or higher in Honors Algebra II or Algebra II with teacher recommendation.

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 sequences and series. Review work is required prior to course.

Honors Trigonometry — Grade: 11-12

Pathways: All | Credit: 1 | Prerequisites: "B" or higher in Honors Algebra II or "B" in Algebra II with teacher recommendation.

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 Notations: 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.***

AP Statistics — Grade: 11-12

Pathways: All | Credit: 1 | 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: "B" average or higher in prerequisite course(s). Students enrolled in AP courses take the AP Exam as outlined in the student handbook. AP Statistics is weighted for cumulative GPA calculation, see p. 64. A TI-83 Plus or TI-84 Graphing Calculator will be used extensively throughout the course, and students are required to provide their own such calculator for the course.

AP Calculus AB — Grade: 11-12

Pathways: All | Credit: 1 | Prerequisites: "B" average or higher in Honors Pre-Calculus and Honors Trigonometry

Description: AP Calculus is designed for students who have exhibited strong mathematical and problem solving abilities. The focus of this course is to develop the abstract ideas and techniques which are crucial to such topics as function limits, derivatives, integrals, and their real world applications. Additional topics will include preparation for the AP Exam.
Special Notations: Students enrolled in AP courses take the AP Exam as outlined in the student handbook. AP Calculus is weighted for cumulative GPA calculation, see p. 64. Students who score a 3, 4, or 5 on the Advanced Placement Exam may receive college credit for Calculus I or be placed directly into Calculus II by their respective college or university.

AP Calculus BC — Grade: 11-12

Pathways: All | Credit: 1 | Prerequisite: Passing grade (3 or higher) on the AP Calculus AB test is required to take AP Calculus BC

Description: The AP Calculus BC course is a natural continuation of the AP Calculus AB course. Throughout the BC course, a thorough review of AB topics will lead to the fourth "Big Idea" of AP Calculus – Series. An in-depth study of series of numbers, power series, and various methods to determine convergence or divergence of a series will take place. Students will examine how approximations of known functions can be done using Maclaurin and Taylor series. This concept of approximation is a common theme throughout AP Calculus, and the power series provides a unifying, comprehensive conclusion to AP Calculus.

MATHEMATICS ELECTIVES

Coding I — Grade: 9-12

Pathways: All | Credit: 0.5 | Prerequisite: None

Description: Coding I is an introductory course that will explore modern programming languages and common coding concepts such as Boolean algebra, variables, branching and looping. Students will write code using the Java programming language.

Coding II — Grade 10-12

Pathways: All | Credits: 1.0 | Prerequisite: Coding I

Description: Coding II extends the student's knowledge and programming skills in Java to include constructs such as arrays, methods, objects, and memory management.

AP Computer Science — Grade: 10-12

Pathways: All | Credit: 1.0 | Prerequisite: Coding II

Description: AP Computer Science will focus on developing student's Java skills in preparation for the AP Computer Science A exam, which requires students to understand and be able to program control structures, methods, arrays, and search/sort algorithms.

Applications of Trigonometry — Grade: 11-12

Pathways: All | Credit: .5 | Prerequisite: Algebra II

Description: Trigonometry will focus on the relationships found within a triangle and their application to the workplace. Topics will include triangle relations, the use of similar triangles, harmonic motion, linear and radial velocity, and using trigonometry to find unknown angles and sides. Real world examples from surveying, construction, and architecture will be used to demonstrate the use of this very "hands-on" area of mathematics.

Statistics — Grade: 11-12

Pathways: All | Credit: .5 | Prerequisite: Algebra II or Geometry II

Description: The purpose of Statistics is to strengthen students' ability to understand and manipulate statistical data in a purposeful manner. Statistics will examine numerical and graphical descriptive statistics, the Normal curve, sampling methods, sample design and linear regression. Students will use software packages as an integral part of the course to calculate, display and present statistical data.

SAT Prep — Grade: 11

Pathways: All | Credit: .5 | Prerequisite: None

Description: This course is designed to prepare students to take the SAT college entrance exam. The course will cover the content which will be assessed on the exam, and will also address test-taking skills and strategies for taking the SAT in particular. Students will be taught by both a math teacher and an English teacher at different times throughout the course. Students should plan to take the SAT exam as close to the end of this course as possible.

PROGRESSION OF MATH COURSES
REFERENCE GUIDE

Pre-Algebra

Algebra I

Geometry

Algebra II or Geometry II

Pre-Calculus / Honors Trigonometry / AP Statistics
(Honors Pre-Calculus)

AP Calculus AB

AP Calculus BC

MUSIC

Concert Band — Grade: 9-12

Pathways: AC | 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.

Concert Choir — Grade: 9-12

Pathways: AC | 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 three 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.

Guitar I — Grade: 9-12

Pathways: AC | Credit: .5 | Prerequisite: None

Description: **Guitar I** is designed for students with no previous guitar experience or music-reading experience. Students will receive guidance in solving problems related to playing the guitar on a beginning level and will learn many of the different styles, skills, and techniques required to become a successful musician. Areas of concentration include: correct posture, note reading, aural skills, simple strumming, rhythmic patterns, chord study, basic music theory, and scales.
Special Notations: A course fee of $15.00 will be charged for student methods books and guitar maintenance.

Guitar II — Grade: 9-12

Pathways: AC | Credit: .5 | Prerequisites: Completion of Guitar I with approval from Guitar instructor

Description: Guitar II is designed as a continuation of the Guitar 1 curriculum. Students will receive guidance in solving problems related to playing the guitar on an intermediate level. In addition to the concepts covered in Guitar I, areas of concentration include: flat picking, finger picking, melody construction, tablature notation, improvisation, singing songs, musical form, music careers/related disciplines, and performance experiences.
Special Notations: A course fee of $15.00 will be charged for student method books and guitar maintenance.

Jazz Studies — Grade: 9-12

Pathways: AC | 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.

Music History — Grade: 9-12

Pathways: AC | 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.

Music Technology Lab 1 — Grade: 9-12

Pathways: AC | Credit: .5 | Prerequisite: None

Description: **Music Technology Lab 1** incorporates digital audio and visual samples. Participants will learn how to record digital audio sound using a PC using microphones, compressing data and burning onto a CD, sequencing and editing, manipulating digital information. This course is project-based. Software/programs used include Audacity, Windows Movie Maker, iMovie, and iTunes and others. Participants will learn how to create a podcast, ringtones, music videos, short-story videos and burning to a DVD.

Music Technology Lab 2 — Grade: 9-12

Pathways: AC | Credit: .5 | Prerequisite: Music Tech Lab 1

Description: **Music Technology Lab 2** incorporates Scoring for Film: Using a short scene from a video, creating a new sound bed, creating a short video and putting sound with it using iMovie, and creating a product to sell and then make a 30 or 60-second commercial with sound and voice-over. Other projects include, but are not limited to creating a commercial or PSA for a school cub, or school sponsored event, and recording live instruments or synthesizer and in separate tracks and mixing down. Students will also create a travel movie short using Windows Movie Maker Live or iMovie that uses classical symphonic music as the sound bed and stills and may create a movies short from an event at BSHS (a sport short, a concert, a pep rally, etc.) with appropriate voice over and/or style of music

Music in Film — Grade: 9-12

Pathways: AC | 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.

Piano Lab — Grade: 9-12

Pathways: AC | Credit: .5 | Prerequisite: None

Description: **Piano Lab** is designed for the student with little or no experience in piano. The course covers basic skills in music notation: notes & symbols, scales, intervals, chords, and progressions which will lead to the ability to play simple songs. This course will also cover sequencing with a 16-track recorder. Satisfactory participation in class activities and successful completion of several projects is required.

Intro to Music Theory — Grade: 9-12

Pathways: AC | 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 Notations: Students must be fluent in at least one clef (treble or bass).

AP Music Theory — Grade: 10-12

Pathways: AC | Credit: 1 | Prerequisite: Approval of Music Theory Teacher

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. Students enrolled in AP courses take the AP Exam as outlined in the student handbook. AP Music Theory is weighted for cumulative GPA calculation, see p. 64.

Pop, Rock, & Hip Hop — Grade: 9-12

Pathways: AC | Credit: .5 | Prerequisite: None

Description: **Pop, Rock & Hip Hop** investigates the beginning of "pop" music with the invention of electronic instruments. Students will travel back in time to listen to and discover the many pop/rock styles from the 50's through the present. Beyond the listening, students will discuss relationships between the musical influences, cultural aspects, and boom in the music entertainment industry.

Extra-Curricular Offerings in Music

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.

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.

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.

Twilight Jazz Band

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

Gold Jazz Band

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

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.

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.

Cantabile

Vocal ensemble that is open to all interested students. Membership is limited by audition.

SCIENCE

NINTH GRADE

Environmental Science
Biology
Honors Biology

Electives:
- Biotechnology
- Microbiology

TENTH GRADE

Biology
Honors Biology
Chemistry
Honors Chemistry
Plant & Greenhouse Science
Honors Physics I
Honors Animal & Vet. Science
AP Environmental Science

Electives:
- Astronomy/Meteorology
- Biotechnology
- Microbiology
- Oceanography

ELEVENTH AND TWELFTH GRADES

Biology
Chemistry
Honors Chemistry
Honors Physics I
Honors Physics II
Plant & Greenhouse Science
AP Chemistry
AP Physics C
AP Biology
AP Environmental Science

Electives:
- Anatomy and Physiology
- Astronomy/Meteorology
- Biotechnology
- Horticultural Science
- Introduction to Forensics
- Microbiology
- Oceanography
- Research Seminar

Environmental Science — Grade: 9

Pathways: SH | Credit: 1 | Prerequisite:

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.

Biology — Grade: 9-10

Pathways: SH | Credit: 1 | Prerequisite: 8th grade placement or Environmental Science

Description: The emphasis for this biology course is the study of living things and their relationships with each other as well as their environment. Laboratory work is an important part of this course. Students are expected to be able to think critically, make careful observations and reach conclusions based upon the data obtained. This course will be covering the biology and ecology state standards. Units include: Characteristics of living things, biochemistry, cells, photosynthesis, cellular respiration, cell cycle, DNA technologies, protein synthesis, genetics and population genetics.

Honors Biology — Grade: 9-10

Pathways: SH | Credit: 1 | Prerequisite: 8th grade placement or Environmental Science

Description: The honors biology course will cover the same state standards and curriculum as the traditional biology class, but will move through the units at an accelerated pace. At the end of the course, the students will have an in depth understanding of the units of study. Laboratory work is also an important part of this course. Students are expected to be able to think critically, make careful observations and reach conclusions based upon the data obtained. Units included in Honors Biology are: Characteristics of living things, biochemistry, cells, photosynthesis, cellular respiration, cell cycle, DNA technologies, protein synthesis, genetics and population genetics.

Special Notations: Selection through 8th grade placement, 8th grade teacher recommendation, or earning a "B" average in Environmental Science. Honors Biology is weighted at 1.05 for cumulative GPA calculation.

Chemistry — Grade: 10-12

Pathways: SH | Credit: 1 | Prerequisites: Successful completion of Algebra I and Biology/Honors 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.

Honors Chemistry — Grade: 10-12

Pathways: SH | Credit: 1 | Prerequisites: Successful completion of Algebra I and Biology/Honors 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.
Special Notations: Honors Chemistry is weighted at 1.05 for cumulative GPA calculation.

Honors Physics I — Grade: 10-12

Pathways: SH | Credit: 1 | 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.
Special Notations: Honors Physics I is weighted at 1.05 for cumulative GPA calculation.

Honors Physics II — Grade: 11-12

Pathways: SH | Credit: 1 | 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 Notations: Honors Physics II is weighted at 1.05 for cumulative GPA calculation.

AP Biology — Grade: 11-12

Pathways: SH | Credit: 1 | Prerequisites: Biology and Chemistry

Description: This course is the equivalent of a college introductory biology course. Topics include molecule and cells, heredity and evolution, and organisms and populations. The emphasis will be a hands-on, experimental approach.
Special Notations: Biology and Chemistry final averages must be 85 percent and above. Students enrolled in AP courses take the AP Exam as outlined in the student handbook. AP Biology is weighted for cumulative GPA calculation, see p. 64. $10 Lab Fee

AP Chemistry — Grade: 11-12

Pathways: SH | Credit: 1 | 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. Students enrolled in AP courses take the AP Exam as outlined in the student handbook. AP Chemistry is weighted for cumulative GPA calculation, see p. 64. $10 Lab Fee

AP Environmental Science — Grade: 10-12

Pathways: SH | Credit: 1 | 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: Students enrolled in AP courses take the AP Exam as outlined in the student handbook. AP Environmental Science is weighted for cumulative GPA calculation, see p. 64.

AP Physics C—Mechanics — Grade: 11-12

Pathways: SH | Credit: 1 | 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 analytic 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: Students enrolled in AP courses take the AP Exam as outlined in the student handbook. AP Physics C is weighted for cumulative GPA calculation, see p. 64.

E L E C T I V E S

Anatomy and Physiology — Grade: 11-12

Pathways: SH | Credit: 1 | 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

Astronomy/Meteorology — Grade: 10-12

Pathways: SH | Credit: 1 | Prerequisite: Biology

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

Special Notations: This course is offered once every other year; offered again in 2017-2018.

Biotechnology — Grade 10-12

Pathways: SH | Credit: 1 | 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

Microbiology — Grade: 10-12

Pathways: SH | Credit: 1 | 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, preparations of specimens, microbial growth, microbial genetics, bacteria, viruses, important eukaryotes and infectious diseases.
Special Notations: $10 Lab Fee

Oceanography — Grade: 10-12

Pathways: SH | Credit: 1 | 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.
Special Notations: This course is offered once every other year; offered again in 2016-2017.

Introduction to Forensics — Grade: 11-12

Pathways: SH | Credit: .5 | Prerequisites: Successful completion of Biology/Honors 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 Notations: $10 Lab Fee

Research Seminar — Grade: 11-12 (Others by Recommendation)

Pathways: SH | Credit: 1 credit | 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.

SOCIAL STUDIES

NINTH GRADE
American Studies
Honors American Studies

TENTH GRADE
Government
Honors Government
AP Government

ELEVENTH GRADE
Government
Honors Government
AP Government

TWELFTH GRADE
World Studies
HACC World History 101
HACC World History 102
AP World History

American Studies — Grade: 9

Pathways: 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. Emphasis is placed on digital and historical literacy, communication, and critical thinking skills which can be translated to college and the work place. Throughout the course, students will develop a greater understanding of the rights and responsibilities of American citizenship.

Honors American Studies — Grade: 9

Pathways: Credit: 1 Prerequisite: None

Description: This honors course is designed to provide college-bound students the opportunity to investigate the same historical concepts and thematic units as the academic-level American Studies course, but with an increased emphasis on primary source texts. These materials will be utilized extensively, 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. Frequent comparisons between past historical events and contemporary America will be examined. Students will be required to successfully demonstrate their learning through a variety of written and verbally executed tasks. Throughout the course, students will develop a greater understanding of the rights and responsibilities of American citizenship. The course will also begin to prepare students for college-level work and a successful experience in Advanced Placement history classes.

Government — Grades: 10-11

Pathways: All Credit: 1 Prerequisite: None

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.

Honors Government — Grades: 10-11

Pathways: All | Credit: 1 | 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 idealogical 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.

Advanced Placement Government and Politics — Grade: 10-12

Pathways: All | Credit: 1 Elective | Prerequisite: See Special Notations

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 Notations: Honors American Studies or teacher recommendation is suggested.

World Studies — Grade: 12

Pathways: All | Credit: 1 | 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.

History 101—World History I (HACC) — Grade: 11

Pathways: All | Credit: 1 Elective (3 College Credits) | Prerequisite: None

Description: History 102 is a college in the classroom experience held at Big Spring High School. There is a one time application fee if you want to earn 3 HACC credits for the course. This course provides an overview of the historical development and interrelationships of the major population centers of Asia, Africa, Europe, and the Americas from Neolithic times to 1500 CE. Using a thematic approach, this course observes the political, economic, social, and cultural characteristics of the various regional groups chosen for study. Important ideas, significant persons, and world views are described in the context of each theme. This course is a transitional course between high school and college.
Special Notations: This course is weighted as an honors course.

History 102—World History II (HACC) — Grade: 11

Pathways: All | Credit: 1 Elective (3 College Credits) | Prerequisite: None

Description: History 102 is a college in the classroom experience held at Big Spring High School. There is a one time application fee if you want to earn 3 HACC credits for the course. The course content emphasizes worldwide developments since 1500. This course is a transitional course between high school and college.
Special Notations: This course is weighted as an honors course.

Advanced Placement World History — Grade: 11-12

Pathways: All | Credit: 1 Elective | 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 Notations: Honors American Studies, Honors Government or teacher recommendation are suggested. Will be offered in alternating years , starting 2016-2017

E L E C T I V E S

Advanced Placement US History — Grades: 10-12

Pathways: All | Credit: 1 Elective | Prerequisite: See Special Notations

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 Notations: Honors American studies or a teacher recommendation are highly suggested.

Advanced Placement European History — Grade: 11-12

Pathways: All | Credit: 1 Elective | Prerequisite: See Special Notations

Description: **The Student must be willing to undertake the challenging reading and writing associated with this AP course.** This course is designed to give eleventh and twelfth grade students an in-depth and intense study of European History. Critical analysis of the political and social conditions in Europe from the Renaissance to our time will be conducted. Students enrolled in this course are to take the AP exam associated with this course. Students who successfully complete the exam may be eligible for advanced college credit, placement or both.
Special Notations: Will be offered in alternating years, starting in 2017-2018

Advanced Placement Psychology — Grades: 11-12

Pathways: BFIT, HS, SH | Credit: 1 Elective | Prerequisite: See Special Notations

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.
Special Notations: Students must have maintained a "B" average in their previous Social Studies courses. Advanced Placement Psychology is weighted at 1.05 for cumulative GPA calculation.

Current Events — Grade: 9-12

Pathways: All | Credit: .5 Elective | 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.

Economics — Grade: 9-12

Pathways: All | Credit: .5 Elective | Prerequisite: None

Description: This is a recommended course for students enrolled in the Business Pathways. 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. An attempt is made to make the course a practical one by studying income tax and investing. A theme that runs throughout the course is the relationship between our economic and political systems.

Geography — Grade: 9-12

Pathways: All | Credit: .5 Elective | Prerequisite: None

Description: This course studies many subfields of Geography including: physical, environmental, cultural, and economic geography. Regular use of current events and real-world applications will lead this project-based course.

GIS — Grade: 9-12

Pathways: All | Credit: .5 Elective | Prerequisite: None

Description: Introduction to the fundamental mapping and computer concepts and skills that underlie Geographic Information Systems (GIS). Topics include representation, display, map scale, coordinate systems, data acquisition, and data management. Students will learn how to create their own maps using GIS technology.

Honors Law II — Grade: 11-12

Pathways: All | Credit: 1 Elective | 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, hate crimes, and terrorism are all major topics. 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 Notations: 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.

Honors Military History — Grade: 10-12

Pathways: All | Credit: 1 Elective | 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 super power. 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.
Special Notations: Students must have maintained a "B" average in their previous Social Studies courses. Honors Military History is weighted at 1.05 for cumulative GPA calculation.

Introduction to Psychology — Grade: 11-12

Pathways: BFIT, HS, SH | Credit: 1 Elective | Prerequisite: None

Description: This elective course is designed to give the student an in-depth study of the fundamental concepts and ideology of modern psychology. This course will cover basic familiarity with some of the fundamental concepts and hypootheses of modern psychology while providing more opportunities for enrichment and 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 detailed research project of their own design.

Law I — Grade: 10-12

Pathways: All | Credit: .5 Elective | 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.

Military History I — Grade: 9-12

Pathways: All | Credit: .5 Elective | 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.

Sociology — Grade: 11-12

Pathways: HS, SH | Credit: 1 Elective | 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 of their community will be required.

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 Students[1]

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 Students[2]

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/fore ign_students%27_eligibility_for_enrollment/507311.

TESTING PROGRAMS

ACT—American College Test — Grade: 11

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. The 2015-2016 fee is $39.50 without the writing subtest. The fee is $56.50 including the writing test. 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, 11, and 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 can earn a student college credit when they enroll in college. Exam fee is $92 (2015-2016 school year) per exam. Fee waivers are available, to help reduce the cost of the test, for those who qualify for free/reduced lunch.

*This Exam is a **requirement** for taking an AP Course. Students failing to register for the Exam will be dropped from their AP course and banned from enrolling in any other AP course for the duration of their schooling.

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 and 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 and 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. There is a nominal fee for this exam ($15 for the 2015-2016 school year). 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

Description: The SAT is a college admission test made up of three sections: Critical Reading, Math, and Writing. 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. The 2015-2016 SAT cost is $43 and the cost for the SAT with the essay is $54.50. 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

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.

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 Classroom courses 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 carry a weight of .5
  - Ex.: If a student earns an A in an Honors class or a dual enrollment courses, instead of the 4.0 added into the cumulative GPA and class rank, a 4.5 will be added.
- AP courses have an added weight of 1.0.
  - Ex.: If a student earns an A in an AP course instead of the 4.0 added into the cumulative GPA and class rank, a 5.0 will be added
- Students enrolled in AP courses take the course's AP exam as outlined in the student handbook at an approximate cost of $91 (2015-2016 school year) per exam. Fee waivers may be available based on financial need.

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

Honors Algebra II
Honors Art Humanities
Honors Biology
Honors Chemistry II
Honors Physics I
Honors Physics II
Honors Drawing & Painting
Honors English I, II, III, IV
Honors Geometry
Honors American History of the 19th Century
Honors American History of the 20th & 21st Centuries
Honors Introduction to Psychology
Honors Military History
Honors Pre-Calculus
Honors Spanish IV, V
Honors Animal and Veterinary Science

Accounting I (Dual Enrollment)
Horticulture Science (Dual Enrollment)
Introduction to Agribusiness (Dual Enrollment)
World History II (Dual Enrollment)

Advanced Placement Biology
Advanced Placement Calculus II (AB)
Advanced Placement Chemistry
Advanced Placement Computer Science
Advanced Placement English: Literature and Composition
Advanced Placement Environmental Science
Advanced Placement European History
Advanced Placement Music Theory
Advanced Placement Physics C—Mechanics
Advanced Placement Probability & Statistics
Advanced Placement Studio Art
Advanced Placement US Government and Politics
Advanced Placement US History
Advanced Placement World History

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 and AP 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.

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.

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.

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.

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.

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.

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.

CAREER EXPLORATION OPPORTUNITIES

Career Internships — Grades: 11-12

Pathway: Any | Credits: 0.5-5 possible | Prerequisite: Two teacher recommendations

This program is a supervised, paid or nonpaid 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. For more information, see Mrs. Black, certified career coordinator.

Special Notations: Two teacher recommendations are required.

HACC Emergency Medical Technician Program — Grade: 11-12

Pathway: HS, SH | Credits: 1 | Prerequisite: None

Description: This program is offered through HACC. It is a 220-hour program in addition to a required clinical experience. Class will be held at Cumberland Goodwill EMS Station in Carlisle. Tuition for the course is $825.

Special Notation: Two teacher recommendations are required.

Health Care Career Exploration Program — Grade: 12

Pathway: HS | Credits: 1 | Prerequisite: None

Through a partnership with Holy Spirit Hospital, students spend the first quarter of their senior year exploring the many career opportunities offered at a large health care facility. Program participants include students from 12 different high schools which comprise the Cumberland-Perry Consortium for Career Education. Only two students from Big Spring are selected to attend. For more information, see Mrs. Black, certified career coordinator.

HACC Nurse Aide Training Program — Grades: 11-12

Pathway: HS, SH | Credits: .5 | Prerequisite: None

Description: This program is offered through HACC. It is a 120-hour program which includes classroom, lab, and clinical experiences. Classes are held at Carlisle High School. Enrollment in the course requires a Health Exam, 2-step PPD, flu shot, as well as a Criminal History Check. Tuition for the course is $898; however, scholarships are available.

Special Notation: Two teacher recommendations are required.

Work Experience Program — Grades: 11-12

Pathway: Any | Credits: 0.5 to 5 possible | Prerequisite: None

This program allows students the opportunity to gain practical on-the-job training within their chosen career field while enrolled in high school. Work Experiences vary in duration; therefore credits are earned based upon the amount of time spent at the work site. Transportation and related costs of participation are the student/parent's responsibility. For more information, see Mrs. Black, certified career coordinator.

COLLEGE PROGRAMS

CIHS—College in the High School (HACC) Grades: 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. HACC applicaiton

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
Agribusiness	No	3.0	1.0	$150
World History 102	No	3.0	1.0	$150
World History 101	No	3.0	1.0	$150

PSU (Penn State University) College in the High School/Cohort Grade: 11-12

Description: Penn State University (PSU) in partnership with a consortium of Cumberland County school districts, has established an opportunity for students to earn college credits from PSU's adjunct professors at the campuses of the consortium school districts. This partnership will provide our students with opportunities to experience and earn PSU credits within the supportive structure of our high schools.

Students entering their junior or senior year may enroll in PSU—College in the High School program. Submitting a written sample of work will be required with application. The structure is established to be cohort-like in nature. Students will be required to take every course in the cohort. Students will progress through the courses earning PSU credits.

Cost: PSU will offer a half tuition scholarship reducing the cost from the standard PSU credit rate of $1572 to $786 plus applicable fees. Total approximate cost per course would be $872.

Proposed PSU courses for the 2016-2017 school year are outlined below:

- Semester 1
  - ENG 015 (Comp & Rhetoric)
  - HIST 020 or 021 (American Civilization)

- Semester 2
  - CAS 100 (Speech)
  - PSYCH 100 (Psychology)

ADDITIONAL NON-CREDITED CAREER EXPLORATION OPPORTUNITIES

ACE Mentoring Program — Grades: 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 — Grades: 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 — Grades: 11

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.

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.

Big Spring High School NCAA Approved Courses — Grade: 9

<u>English</u>
AP English Language and Composition
AP English Literature and Composition
Honors English III, II, I
English IV A, III A, II A, I A (Academic level only)
LS Literature, LS English
Creative Writing
Public Speaking
Shakespeare

<u>Mathematics</u>
AP Calculus AB
AP Calculus BC
AP Statistics
AP Computer Science A
Honors Pre-Calculus and Trigonometry
Algebra III
Honors Algebra II
Algebra II
Honors Geometry
Geometry
Algebra I
Algebra I, Part 1 and Part 2
LS Algebra
LS Math
Statistics

<u>Social Science</u>
AP US Government and Politics
AP World History
AP European History
Government
World Cultures
American History 20th/21st Century
Honors American History 20th/21st Century
American History 19th Century
Honors American History 19th Century
Military History
Honors Military History
Intro to Psychology
Honors Intro to Psychology
Law I, Law II
Economics
Geography
Sociology
Current Events

<u>Science</u>
AP Biology
AP Chemistry
AP Environmental Science
AP Physics C
Honors Physics II
Honors Physics
Chemistry
Chemistry in the Community
Honors Biology
Biology
Environmental Science
Oceanography
Meteorology/Astronomy
Intro to Forensics
Microbiology
Bio-technology

<u>Additional Courses</u>
Spanish I, II, III
Honors Spanish IV, V
French I, II, III
Honors French IV, V

NCAA ELIGIBILITY CENTER QUICK REFERENCE GUIDE

Eligibility Center

NCAA Division I Initial-Eligibility Requirements

Core Courses: (16)

- **Initial full-time collegiate enrollment *before* August 1, 2016:**
  - **Sixteen (16) core courses** are required (see chart below for subject-area requirements).
- **Initial full-time collegiate enrollment *on or after* August 1, 2016:**
  - **Sixteen (16) core courses** are required (see chart below for subject-area requirements).
    - Ten (10) core courses completed before the seventh semester; seven (7) of the 10 must be in English, math or natural/physical science.
      - These courses/grades are "locked in" at start of the seventh semester (cannot be repeated for grade-point average [GPA] improvement to meet initial-eligibility requirements for competition).
  - *Students who do not meet core-course progression requirements may still be eligible to receive athletics aid and practice in the initial year of enrollment by meeting academic redshirt requirements (see below).*

Test Scores: (ACT/SAT)

- Students must present a corresponding test score and core-course GPA on the sliding scale (see Page No. 2).
  - **SAT:** critical reading and math sections.
    - Best subscore from each section is used to determine the SAT *combined* score for initial eligibility.
  - **ACT:** English, math, reading and science sections.
    - Best subscore from each section is used to determine the ACT *sum* score for initial eligibility.
- All ACT and SAT attempts *before* initial full-time collegiate enrollment may be used for initial eligibility.
- **Enter *9999* during ACT or SAT registration to ensure the testing agency reports your score directly to the NCAA Eligibility Center. *Test scores on transcripts will not be used*.**

Core Grade-Point Average:

- Only *core courses* that appear on the high school's List of NCAA Courses on the NCAA Eligibility Center's website (www.eligibilitycenter.org) will be used to calculate your core-course GPA. Use this list as a guide.
- **Initial full-time collegiate enrollment *before* August 1, 2016:**
  - Students must present a corresponding test score (ACT sum score or SAT combined score) and core-course GPA (minimum 2.000) on Sliding Scale A (see Page No. 2).
  - Core-course GPA is calculated using the **best 16 core courses** that meet subject-area requirements.
- **Initial full-time collegiate enrollment *on or after* August 1, 2016:**
  - Students must present a corresponding test score (ACT sum score or SAT combined score) and core-course GPA (minimum 2.300) on Sliding Scale B (see Page No. 2).
  - Core-course GPA is calculated using the **best 16 core courses** that meet both progression (10 before seventh semester; seven in English, math or science; "locked in") and subject-area requirements.

DIVISION I
Core-Course Requirement (16)

4	years of English
3	years of math (Algebra I or higher)
2	years of natural/physical science (1 year of lab if offered)
1	year of additional English, math or natural/physical science
2	years of social science
4	years of additional courses (any area above, foreign language or comparative religion/philosophy)

DIVISION I – 2016
Qualifier Requirements
**Athletics aid, practice, and competition*

- 16 core courses
  - Ten (10) core courses completed before the start of seventh semester. Seven (7) of the 10 must be in English, math or natural/physical science.
    - "Locked in" for core-course GPA calculation.
- Corresponding test score (ACT sum score or SAT combined score) and core-course GPA (minimum 2.300) on Sliding Scale B (see Page No. 2).
- Graduate from high school.

DIVISION I – 2016
Academic Redshirt Requirements
**Athletics aid and practice (no competition)*

- 16 core courses
  - No grades/credits "locked in" (repeated courses after the seventh semester begins may be used for initial eligibility).
- Corresponding test score (ACT sum score or SAT combined score) and core-course GPA (minimum 2.000) on Sliding Scale B (see Page No. 2).
- Graduate from high school.

NCAA ELIGIBILITY CENTER QUICK REFERENCE GUIDE

Eligibility Center

Division II Initial-Eligibility Requirements

Core Courses

- **Division II currently requires 16 core courses.** See the chart below.
- **Beginning August 1, 2018,** to become a full or partial qualifier for Division II, all college-bound student-athletes must complete the 16 core-course requirement.

Test Scores

- **Division II** currently requires a minimum SAT score of 820 or an ACT sum score of 68. **Beginning August 1, 2018,** Division II will use a sliding scale to match test scores and core-course grade-point averages (GPA). The sliding scale for those requirements is shown on Page No. 2 of this sheet.
- The SAT score used for NCAA purposes includes **only** the critical reading and math sections. The writing section of the SAT is not used.
- The ACT score used for NCAA purposes is a **sum** of the following four sections: English, mathematics, reading and science.
- **When you register for the SAT or ACT, use the NCAA Eligibility Center code of 9999 to ensure all SAT and ACT scores are reported directly to the NCAA Eligibility Center from the testing agency. Test scores that appear on transcripts will not be used.**

Grade-Point Average

- Be sure to look at your high school's List of NCAA Courses on the NCAA Eligibility Center's website (www.eligibilitycenter.org). Only courses that appear on your school's approved List of NCAA Courses will be used in the calculation of the core GPA. Use the list as a guide.
- The current **Division II** core GPA requirement is a minimum of 2.000. **Division II** core GPA required to be eligible for competition **on or after August 1, 2018,** is 2.200 (corresponding test-score requirements are listed on the Sliding Scale on Page No. 2 of this sheet).
- The minimum **Division II** core GPA required to receive athletics aid and practice as a partial qualifier **on or after August 1, 2018,** is 2.000 (corresponding test-score requirements are listed on the Sliding Scale on Page No. 2 of this sheet).
- Remember, the NCAA core GPA is calculated using NCAA core courses only.

DIVISION II 16 Core Courses	
3	years of English.
2	years of mathematics (Algebra I or higher).
2	years of natural/physical science (1 year of lab if offered by high school).
3	years of additional English, mathematics or natural/physical science.
2	years of social science.
4	years of additional courses (from any area above, foreign language or comparative religion/philosophy).

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 objectives.

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 guidance counselor for an application. Clicking on the program names below will connect you to the program web page at www.cpavts.org.

2016-2017 CAREER PATHWAYS AND PROGRAMS AT CPAVTS

CONSTRUCTION AND MAINTENANCE Carpentry Electrical Construction and Maintenance Heating/Ventilation/Air Conditioning Horticulture/Landscaping Masonry	**ARTS & TECHNOLOGY** Advertising Art & Design Computer Networking Graphic Communications
MANUFACTURING Electronics Technology Precision Machine Technology Welding Technology	**HEALTH SCIENCES** Dental Assistant Nurse/Nursing Assistant Health Careers Technicians
HUMAN SERVICES AND HOSPITALITY Cosmetology Criminal Justice Culinary Arts Early Childhood Education	**TRANSPORTATION & LOGISTICS** Auto Collision Technology Auto 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, also called dual enrollment, allows high school students to take college classes while enrolled at CPAVTS during the regular school day. CHS is considered *dual enrollment* because students earn credits toward high school graduation and a college degree at the same time. Classes are taught by CPAVTS teachers who are approved by Harrisburg Area Community College or Pennsylvania College of Technology to teach these classes. The college credits are awarded by HACC or Penn College, but the credits may transfer to other colleges and universities. Details on College in the High School courses can be found at www.cpavts.org.

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

Twenty one 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.

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 principals 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 2014-2015 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.

Carpenter	**Industry Certifications**	**Related Occupations**
2014 Median Wage in PA	OSHA – 10	Estimator
$45,138 per year	PA Builders Association	Dry wall installer
		Construction & building inspector
Program of Study Approved	2015 High Priority Occupation	

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.

Electrician	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA	OSHA – 10	Electrical engineer
$57,042 per year	PA Builders Association	Avionics technicians
		Construction & building inspector
Program of Study Approved	2015 High Priority Occupation	

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 interested an opportunity to pursue a career in plumbing.

HVAC-R Technician	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA	EPA 608, PA Builders	Service technician
$46,254 per year	Association, OSHA - 10	Plumber
		Sheet metal or pipe fitter
Program of Study Approved	2015 High Priority Occupation	

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!

Landscaping & Groundskeeper	Industry Certification	Related Occupations
2014 Median Wage in PA $26,600 per year Program of Study Approved	OSHA- 10	Floral designer Groundskeeper Landscaper

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	Industry Certification	Related Occupations
2014 Median Wage in PA $48,983 per year	OSHA – 10 Rough Terrain Forklift	Tile setter Cement finisher Construction supervisor
Program of Study Approved	2015 High Priority Occupation	

COMMUNICATIONS 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	Industry Certification	Related Occupations
2014 Median Wage in PA $44,000 per year	Adobe® Certification	Web page designer Graphic illustrator
Program of Study Approved		

GRAPHIC COMMUNCATIONS

The **Graphic Communications** program provides students with practical instruction in the basics of producing a wide variety of printed materials. They learn the offset printing process by preparing projects from the initial design to finished product, and the theory of photography is taught: Students use a digital camera and digital plate-setting to produce plates used in the reproduction of printed materials. This program also provides students with practical experience in learning the techniques of layout and design of a printing assignment, as well as computer skills, which are learned through the use of Windows and Macintosh operating systems. Additionally, students learn how to proofread their work, which is an important part of preprint operations to ensure accuracy before work is sent to press. Other activities included in the curriculum are: paper selection; cutting and binding; and collating and finishing. Competencies in printing press operations on a wide variety of equipment are stressed in the program; work orders from a variety of sources provide students with opportunities to experience actual production work.

Printing Press Operator	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA	Adobe® Certification	Printer
$35,600 per year		Graphic designer
Program of Study Approved		

COMPUTER NETWORKING – *new for 2016-2017*

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	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA	To be determined	Network Administrator
$66,794 per year		Systems Analyst
		Security Specialist
Program of Study Approved	2015 High Priority Occupation	

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 asks 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	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA	PA Dental Radiographic	Dental hygienist
$33,719 per year	First Aid/CPR/AED	
Program of Study Approved	2015 High Priority Occupation	

NURSING/NURSING ASSISTANT

Students in the **Nursing** 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 Center.

Certified Nursing Assistant	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA $27,884	C.N.A. First Aid/CPR/AED	Nurse practitioner
Program of Study Approved	2015 High Priority Occupation	

HEALTH CAREERS TECHNICIANS

The **Health Careers** program prepares students to assist a variety of medical professionals. Since most jobs in this field require additional schooling (often extensively so), students are also prepared to enter a post-secondary institution to continue their studies. In pursuit of these two goals, graduates can emerge with their Pharmacy Technician Certification and certification in First Aid/CPR. Skills taught during the course of this program include: learning anatomical, physiological, and medical terminologies, understanding healthcare structures and principles (for example, communications, ethics, and parents' rights), identifying various medications, their uses, and how to calculate dosages, and demonstrating basic patient care skills (bed-making, isolation techniques, dressing changes, taking vital signs, personal patient care, transfers, range of motion skills, and many others).

Pharmacy Technician	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA $29,468 per year	First Aid/CPR/AED Pharmacy Technician	Physical therapist Radiology technician Surgical nurse Respiratory therapist
Program of Study Approved	2015 High Priority Occupation	Pharmacist

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	**Industry Certifications**	**Related Occupations**
2014 Median Wage in PA $43,049	ServSafe®	Cook, Pastry chef Butcher, Meat cutter
Program of Study Approved	2015 High Priority Occupation	

COSMETOLOGY

The **Cosmetology** program at CPAVTS gives students a great head start to a lucrative career. Our curriculum is rigid, however, by the time the student graduates, they will have skills desirable to employers in the Cosmetology industry. Students in the program learn all aspects of haircare, 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 be to eligible to test for the PA Cosmetology License Exam.

Cosmetologist	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA	State Board of Cosmetology	Barber
$23,900 per year		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 procedure; 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	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA	First Aid/CPR	Police officer
$60,200 per year	National Incident Management	Fire Marshall

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	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA	CDA Ready Certification	Group supervisor
$24,800 per year	First Aid/CPR	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	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA	PA Inspection and Emissions	Painters & customizers
$40,923 per year		Insurance adjuster

Program of Study Approved

2015 High Priority Occupation

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/electronics 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	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA $37,568 per year	PA Inspection and Emissions	Repair estimator Safety or emissions inspector
Program of Study Approved	2015 High Priority Occupation	

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.

Diesel Technician	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA $42,589 per year	PA Inspection and Emissions Air conditioning 609, OSHA 10	Mobile heavy equipment repair Farm equipment repair
Program of Study Approved	2015 High Priority Occupation	

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 use of data base (computer) entry system for stored materials

Shipping and Receiving Clerk	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA $36,146 per year	OSHA – 10	Stock supervisor Distribution clerk Forklift operator
Program of Study Approved	2015 High Priority Occupation	

MANUFACTURING

ELECTRONICS TECHNOLOGY

The **Electronics Technology** program provides a foundation in the principles of basic electronics and an in depth background in the field. This program will introduce the student to computers and many of the popular operating systems. This program includes instruction beginning with the structure of the atom, units of measurement, and most of the formulas required to understand basic electronics. For all theory presented, the student will construct circuits and do experiments to help them to understand the theories learned. The student will apply learned theories to testing electronic components and diagnosing circuit problems. The student is also introduced to digital electronics where they build and analyse logic circuits, and will learn how microprocessors function and how they can be used to control electronic systems. Other activities include rebuilding a (PC) computer (identifying all major components and determining their function); installing and studying most Windows operating systems; and learning how to diagnose many of the common computer problems encountered.

Electronics Engineering Technician	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA $55,800	Student Electronics Technician OSHA 10	Broadcast technician Avionics technician Data system technician
Program of Study Approved		

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	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA $39,530	NIMS - multiple	CNC operator Tool and die maker Maintenance Technician
Program of Study Approved	2015 High Priority Occupation	

WELDING TECHNOLOGY

Welding offers training in oxyacetylene and AC/DC arc welding, semiautomatic 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	**Industry Certification**	**Related Occupations**
2014 Median Wage in PA $37,999 per year	AWS®	Sheet metal worker Boilermaker
Program of Study Approved	2015 High Priority Occupation	