

Berlin Brothersvalley  
High School  
Catalog

2018-2019



*Berlin Brothersvalley High School Catalog*

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# I. Graduation Requirements

<u>State Required Courses</u>	<u>Credits</u>
English	4
Social Studies	3
Math	3
Science	3
Flex Credit (one additional math, science or social studies credit)	1
Arts/Humanities	2
Physical Education	1
Health	1
Graduation Project*	(.5) credit will be earned upon successful completion of graduation project requirements

<u>Local District Required Courses</u>	<u>Credits</u>
STEM	2
Concentration Pathway	<u>5</u>
	<b>25.5</b>

Students planning to attend a four year college should take four math and science credits.

# II. GRADING SCALE

## BBHS Grading Scales

<u>Grade</u>	<u>P/F</u>	<u>Low Value-High Value</u>	<u>Main</u>		<u>Honors &amp; College</u>	<u>SCTC / SCTC</u>	
			<u>1.0</u>	<u>1.05</u>	<u>Dual Enr./AP</u>	<u>Z</u>	<u>Z</u>
A+	P	97-100	4.333	4.550	4.766		
A	P	93-96	4.000	4.200	4.400	90-100	4.0
A-	P	90-92	3.667	3.850	4.034		
B+	P	87-89	3.333	3.500	3.666		
B	P	83-86	3.000	3.150	3.300	80-89	3.0
B-	P	80-82	2.667	2.800	2.934		
C+	P	77-79	2.333	2.450	2.566		
C	P	73-76	2.000	2.100	2.200	70-79	2.0
C-	P	70-72	1.667	1.750	1.834		
D+	P	67-69	1.333	1.400	1.466		
D	P	63-66	1.000	1.050	1.100	60-69	1.0
D-	P	60-62	0.667	0.700	0.734		
F	F	0 - 59	0	0	0	0-59	0
P	P	60-100	0	0	0		

(1.0) consists of:	(1.05) consists of:	(1.1) consists of:	(Z) consists of:
Academic	Honors Courses	AP Courses	SCTC courses
Vocational Shops	Lab Courses	College Courses	

## Honor Roll Thresholds

High Honors: 3.67

Honor Roll: 3.0

## III. COURSE DESCRIPTIONS

### AGRICULTURE EDUCATION

#### AG 1-INTRODUCTION TO AGRICULTURE SCIENCE AND MECHANICS (grades 9 and 10) (1 credit)

An introduction to agriculture and agriculture mechanics. A general study of careers, livestock, plant and soil science, FFA, welding, carpentry, safety, and other mechanics.

#### AG 2-AGRICULTURE PRODUCTION (grades 10-12) (1 credit)

This area of agriscience is designed to provide students with knowledge, skills and competencies needed to enter various occupations in agriculture and natural resources. Topics covered in agriscience are animal science and production, plant science, agriculture mechanics, computer applications, leadership and supervised agricultural experience programs. The program combines knowledge and skills with experimental learning and FFA for a total program effect.

#### AG 3-AGRICULTURE MECHANICS (grades 10-12) (1 credit)

This area of study is designed to provide learners with job entry-level skills in the agricultural mechanics industry. Major instructional concepts include an orientation to mechanics industry, leadership, safety, drawing and blueprinting, shop, hand and power tools.

#### AG 4-AGRIBUSINESS MANAGEMENT (grades 10-12) (1 credit)

Agribusiness management is for students who seek further agriculture, business, advancement and management techniques that will enable them to become successful in owning and operating a business.

#### PLANT & ANIMAL BIOSCIENCE (grades 11-12) (1 credit)

##### PLANT SCIENCE AND GREENHOUSE MANAGEMENT

An in-depth study of plant physiology and processes, growing media, environmental effects upon plants and pests of plants. This will also be an introduction to greenhouse management and plants

##### ANIMAL AND LIVESTOCK SCIENCE

A general study of animal and veterinary science; including physiology and biological functions of animals, as well as health, nutrition, reproduction, and care and management of livestock

#### SUSTAINABLE AGRICULTURE (grades 10-12) (1 credit)

The Online Sustainable Agriculture pathway focuses on entrepreneurial and technical skills and careers in the broad spectrum of Agriculture, Food, and Natural Resources.

#### SAE: AGRICULTURAL EXPERIENCE (1 credit)

Students will establish and maintain a supervised agricultural experience program and submit various required records. This course does not have a specified class time and is conducted out of school, including summers. Students must complete an agricultural project. *Independent Study*

#### SMALL GAS ENGINE (grades 10-12) (.5 credit)

This area of study is designed to provide learners with job entry-level skills in the agriculture mechanics industry. Major concepts include an in depth orientation to small gas engines, internal combustion, 2 and 4 stroke theories, hand tools and power tools, and shop safety.

## **WELDING** (grades 10-12)

(.5 credit)

This area of study is designed to provide learners with job-entry level skills in the agriculture mechanics industry. Major instructional concepts include an orientation to mechanics industry, shop safety, blueprinting, MIG welding, TIG welding, Stick welding various types of metals along with the use of hand and power tools.

## **COMPUTER EDUCATION**

### **21<sup>ST</sup> CENTURY TECHNOLOGY SKILLS** (9<sup>th</sup> grade one semester) (.5 credit)

Students will be introduced to 21<sup>st</sup> Century Technology Skills through a variety of Web 2.0 tools and computer software including: networking tools, collaboration tools, presentation/data sharing tools, image sharing/editing tools, and online utilities. This course also includes units on Internet Safety and Digital Citizenship. This class is aligned to the National Educational Technology Standards for Students as well as the State of Pennsylvania Standards. A major goal of this course is to integrate the four C's into the students skills and abilities (critical thinking and problem solving, communication, collaboration, and creativity and innovation) using technology. Students will participate in technology-enriched activities that incorporate individual and cooperative learning opportunities.

### **INTRODUCTION TO CAREER EDUCATION** - Grade 9 - One Semester (.5 credit)

In this course, students will be introduced to the following areas of Career Education and Work: Skill and Interest Inventories, Career Awareness and Preparation, Career Acquisition, Career Retention and Advancement, and Appropriate Workplace Conduct. Students will be introduced to the world of working by engaging in all the necessary steps of obtaining employment. Students will use various resources to research job opportunities of interest, complete a job application, resume, cover letter, and participate in mock interviews. They also will interact with a variety of adults already working to learn about careers of interest through participation in face-to-face interviews and other learning opportunities. The students will also learn how to effectively communicate in a professional environment, both electronically and interpersonally. This class is aligned to the Pennsylvania State Standards for Career Education and Work and the National Business Education Association standards for Career Development.

### **COMPUTER NETWORKS I** (for grades 10-12)

(.5 credit)

In this course students will learn how a computer works and which components are needed. They will trouble shoot problems, and install operating system software, perform upgrades and maintenance on real computer systems. They will learn how to configure peripherals to work together and correctly. They will explore productivity software and in various platforms. The second part of the course will deal with computer networks both local and wide area. Students will acquire a working knowledge of how a computer functions and a complete understanding of software applications. There will also be a unit, which covers the iPad and educational applications of mobile technology. Prerequisite: 21<sup>st</sup> Century Technology Skills and Introduction to Career Education.

### **WEB PAGE DESIGN 1 & 2** (for grades 10-12)

(.5 credit each)

This is a two-semester course in which students will learn to create and edit a web site. They will build upon skills learned in 21<sup>st</sup> Century Technology Skills to create pages that are both functional and visually appealing. They will complete units in HTML, Graphic Design, Animation, Cascading Style Sheets, and Dream Weaver. They will use state of the art design software to create their work and will learn skills that will enable them to create pages that are real world applicable. Students will create projects that mirror real world design tasks and will adapt pages for mobile devices. Prerequisites: Introduction to Career Education and 21<sup>st</sup> Century Technology Skills. \* Possible articulation with Allegany College of Maryland

### **VIDEO GAME PROGRAMMING 1** (for grades 10 thru 12) (.5 credit)

Do you think you want to program games or make mobile apps for a living? Try this course to see for sure. Students will learn the basics of object-oriented programming using the LUA programming language. They will learn skills that are required to create working software applications for the Macintosh Operating System and mobile devices. They will work both individually and as part of a design team to create programs with real world relevance. They will focus on the following topic areas: controls, variables and constants, selection, repetition, graphics, arrays, and files. Prerequisites: Web Page Design and Algebra I with a grade of C or better.

### **VIDEO GAME PROGRAMMING 2** (for grades 10 thru 12) (.5 credit)

Students will push their programming skills to the max in this course. Building upon the introductory course, VGP2 will allow students to learn more advanced programming techniques and commands, with a focus on the completed project and how to get to market. The course will focus on creating complete applications (apps), and computer applications. Students will learn the Lua programming language, which is used to develop games for Android and iOS. Prerequisites: Video Game Programming 1 with a passing grade \* Possible articulation with Allegany College of Maryland

### **3D MODELING AND ANIMATION** (for grades 11 & 12) (.5 credit)

Students will explore the fundamentals of working in 3D space while learning to model the geometry used in architecture, computer games, animation, and computer aided design. Topics include models using primitives, surfacing, lighting, character design and scene composition, as well as analyzing existing 3D art. The more advanced concepts of computer geometry are taught by looking at the basic elements that make computer models: points, curves, surfaces, nurbs, polygons, and textures. The goal of the course is to leave the student with knowledge of many areas of computer modeling, and the ability to create independent work. Class work is sectioned into several individual unit projects throughout the semester, each concentrating on a specific area of modeling. **Prerequisites: None**

### **DIGITAL PHOTO AND VIDEO PRODUCTION** (grades 10-12) (1.0 credit)

This course is designed to be an introduction to digital media, focusing on digital video, graphic design, the Internet, and mobile devices. Using the available technologies, students will master the basic tools necessary to express their thoughts digitally in the form of a digital news show for the high school. Throughout the course, students will experience a variety of roles in the production of digital video creation, editing and post-production and creating mobile apps. They will develop a thorough understanding of copyright and how it applies in a school setting as well as in the real world. Students entering this course should have a genuine interest in graphic design, multimedia and/or technology. This course is highly collaborative, and relies heavily on teamwork and cooperation. Good attendance and work ethic are essential. Prerequisite: web page design or advanced art.

## **FAMILY AND CONSUMER SCIENCES:**

### **NUTRITION** (grades 9-12) (.5 credit)

In this day and age, nutrition should be at the top of everyone's list to improve one's lifestyle. So many Americans are suffering from health related problems and it has been found that your diet plays an important role in that. We live in a world of fast food and disease and it seems there is little effort focused on our health. This hands-on interactive class was developed to show the importance of our health and how nutrition plays a major role in it. Some topics of study include the food guide pyramid, the six nutrients, caloric intake, dieting, exercise, and most importantly, how to eat right and stay fit. (Limited to 20 students per semester).

### **CULINARY ARTS** (grades 9-12) (.5 credit)

Everyone likes to eat and in this class you will do just that. Covering lessons dealing with meal planning, meal preparation, table setting, kitchen equipment, and safety, etc. This is a hands-on class with a lot of group interaction. You will learn the real art behind food and how to make a meal look nice and incorporate all the essential nutrients. (Limited to 16 students per semester)

## **ENGLISH:**

### **ENGLISH 9** (1 credit)

This yearlong course focuses on developing proficient knowledge and skills in reading and writing. During this school year, students will be exposed to a wide variety of literature, including non-fiction, fiction, short stories, and poetry, with an emphasis on drama. This year, students will work to not only understand what they read but to also improve critical thinking and writing skills. Students will develop, organize, and compose expository essays in response to a variety of texts.

### **ENGLISH 9 HONORS** (1 credit)

This course is designed to prepare students for the college prep and AP English Language Arts courses offered at BBHS; therefore, the material is more rigorous. This yearlong course focuses on developing advanced knowledge and skills in reading and writing. During this school year, students will be exposed to a wide variety of literature, including non-fiction, fiction, short stories, and poetry, with an emphasis on drama. Students will be expected to read independently, and will work to not only understand what they read but to also improve analytical thinking and writing skills. In response to many of the assigned texts, students will develop, organize, and compose expository essays, character analysis essays, and theme analysis essays.

### **ENGLISH 10** (1 credit)

This course emphasizes the development and mastery of the core language arts components of reading and writing. The 10<sup>th</sup> grade curriculum focuses on writing analytical constructed responses and expository essays. It also consists of reading and analyzing a variety of literature including novel excerpts, short stories, poetry, and one drama piece. The students will spend the second semester focusing on reading and interpreting nonfiction literature. Assignments are specifically designed around the PA Common Core Standards with the ultimate goal of students receiving a score of proficient or advanced on the Keystone Exam administered at the end of the course in May.

### **ENGLISH 10 HONORS**

(1 credit)

This course is designed for students who are highly motivated and want to prepare for the demands of college by completing this rigorous, fast-paced course. The 10<sup>th</sup> grade Honors English curriculum is designed to emphasize the major facets of English Education: composition, vocabulary, and literature. Coursework consists of reading fiction, non-fiction, poetry, and one Shakespearean drama. Not only will students complete a summer reading assignment, but they will read novels continuously throughout the school year and compose a literary analysis for each novel. Assignments are specifically designed around the PA Common Core Standards with the ultimate goal of students receiving a score of proficient or advanced on the Keystone exam administered at the end of the course in May

### **ENGLISH 11 CAREER PREP**

(1 credit)

This course will focus on strengthening students' reading, writing, research, oral communication, and 21<sup>st</sup> century skills. By focusing on these areas, students will become better equipped with the skills, knowledge, and understanding necessary to achieve success in the workplace and everyday living. Students will experience a variety of literary non-fiction, and respond through writing and oral discussion.

### **ENGLISH 11 COLLEGE PREP**

(1 credit)

College Prep English 11 focuses on preparing students who intend to continue their education beyond the high school level. A strong emphasis will be placed on literature, writing, and research. The course features the development of critical thinking skills through literary analysis of the short story, poetry, drama, and the novel, as well as some non-fiction. Students will also explore college and career options, and enhance their scholarship-writing skills.

### **AP ENGLISH 11 - LANGUAGE AND COMPOSITION** (1 credit)

Following the College Board's suggested curriculum designed to parallel college-level English courses, AP English Language and Composition exposes students to prose written in a variety of periods, disciplines, and rhetorical contexts. This course emphasizes the interaction of authorial purpose, intended audience, and the subject at hand, and through them, students learn to develop stylistic flexibility as they write compositions covering a variety of subjects that are intended for various purposes. AP students are expected to work at an accelerated pace and to engage in outside reading and independent learning. Students must exhibit a "B" average in previous English courses, complete the required summer reading, and have teacher recommendation in order to take this course.

### **ENGLISH 12 CAREER PREP**

(1 credit)

This course will focus on strengthening students' reading, writing, research, oral communication, and 21<sup>st</sup> century skills. By focusing on these areas, students will become better equipped with the skills, knowledge, and understanding necessary to achieve success in the workplace and everyday living. Students will explore nonfiction literature, applicable to real-life situations, and will work to improve their speaking and writing skills for future employment. The graduation project research paper and speech will be addressed in this course.

### **ENGLISH 12 COLLEGE PREP**

(1 credit)

This course addresses the needs of college-bound seniors by focusing on the mastery of literary, reading, and writing skills. Students will read and respond to a broad range of literature, including fiction, non-fiction, short stories, drama, and poetry. Students' writing will focus on the development of research papers, college admissions writing, and analytical essays. The graduation project research paper and speech will be addressed in this course.

### **AP ENGLISH 12 - LITERATURE AND COMPOSITION** (1 credit)

The AP English Literature and Composition course focuses on reading, analyzing, interpreting, and writing about fiction, poetry, and drama from various literary periods. The AP English Literature and Composition course is aligned to an introductory college-level literary analysis course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone.

To demonstrate their understanding of the texts, students will write formally and informally. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. The compositions will go through several drafts before submission, and students will work to improve their written communication skills over the course of the year.

At the end of the course, students will have the opportunity to take the AP exam (for a fee). The exam tests the students' skills in literary analysis, and if a student passes the exam, he/she will be able to bypass an introductory literature course in college.

This course is highly rigorous, and a great degree of independence is expected. Good attendance and work ethic are essential to student success.

**Prerequisites:**

- Students entering this course should have a genuine interest in literature and writing
- Students must have teacher recommendation from previous English teacher(s)
- Students should be able to read and comprehend college-level texts
- Student should be able to apply the conventions of Standard Written English in their writing
- Summer reading may be a component of this course, so a summer reading form from the AP teacher must be completed and submitted as part of the application process
- "Students who plan on taking the Advanced Placement exam are responsible for all costs related to taking the exam. This includes a penalty fee if the student decides not to take the exam once ordered."

**SAT PREP** (grades 11 and 12)

(.5 credit)

This course is designed to prepare students for the rigors of taking the SAT tests. This course will teach students the format of the test and provide both strategies and practice questions for all areas of the test.

## **FINE ARTS & OTHER ELECTIVES:**

**ELECTIVE ART** (Grades 9-12)

(1 credit)

This course is available to all students in grades 9-12 as a beginning art course. The course will be based on learning beginner techniques and processes involved in Arts and Crafts. Students will get to experience a wide variety of lessons and art mediums (drawing, painting, sculpture, and digital).

**ADVANCED ART I** (grades 10-12)

(1 credit)

This course is available to any student after taking Elective Art. This course will be an elaboration on previously learned techniques and processes within the arts. There will be more of a focus on the finer aspects of art such as Art History, Art Aesthetics, and Art Criticism. There will be a new list of advanced art projects to be completed in order to better prepare the students for art careers further down the road. (Students would be able to take this course as many times as wanted. Students are required to have completed Elective Art and receive at least a B average.) This course can be taken for college credit at Berlin High School thru Penn Highlands.

**INTRO TO GRAPHICS AND DESIGN** (grades 10-12) (0.5 credit)

This is an entry-level course designed to introduce students to modern digital art creation tools and techniques. Students will learn and apply the fundamentals of various software applications (such as Illustrator and Photoshop), web design, image editing, drawing and graphic manipulation. Students will be given challenging real world projects and assignments typical in the graphic design industry with an emphasis on typography, image, space, color, balance and form. Recommended Prerequisite: Elective Art.

**BAND (Concert)** (grades 9-12)

(1 credit)

This course has the same objectives as any other course, with the added dimension of the performance of music. The course is designed for interested and talented students and may be elected by students in band and choir. Permission of the instructor through recommendation is required for admission into the course if the student does not possess previous band experience. Students will follow the same procedure as any other elective course when dropping, adding or electing the course. . Students enrolled in band are eligible for honor band festivals.

Prerequisite: Previous school band experience. If you have an interest to join the band and you do not have prior band experience - director's recommendation is required. Participation in the Marching Band is also preferred.

**CHORUS** (grades 9-12)

(1 credit)

Chorus is a performance oriented, co-curricular activity. The students will demonstrate knowledge of basic musical skills through warm-ups, tonal recognition, sight singing, and performance. The students will perform different styles of music including: classical, multi-cultural, jazz, and traditional American. The senior high chorus, which is open to all students in grades 9-12, is a performing ensemble that meets daily. The chorus presents both a winter and spring concert and also performs at baccalaureate. Concert attendance is mandatory for all students enrolled in the class. Students are eligible for participation in PMEA County, District, Regional, and State Festivals, as well as other performance and enrichment opportunities.

**MUSIC APPRECIATION** (grades 10-12) (.5 credit)

This course is an introduction to music which studies the elements of music (notation, scales, meter, rhythm, intervals) instruments of the orchestra, vocalization, and the lives and works of composers from many musical eras. Use is made of recordings, concerts and other media. This course can be taken for college credit at Berlin High School thru Penn Highlands

**BERVALON** (grades 10-12) (1 credit)

This course is designed to enable students to use writing, photography, computer, and interviewing skills to produce the school yearbook. Students should be self-motivated, self-disciplined and be able to work in a team setting in class and out of school. Students must be able to secure transportation to and from evening and weekend events. The class is limited to 15 students. Final approval to be in this class is given by the administration.

**MOUNTAINEERS IN MOTION** (grades 9-12) (1 credit)

Mountaineers in Motion is a class where you are in the school buildings helping out BBSD staff in whatever capacity is needed. We have several students that help the janitorial staff delivering items, some work with their former teachers or in the Pre K program and others help out the secretarial staff. You will also be required to write a letter once a week to either military personnel or your pen pal from Meadow View. We also have different community leaders join us throughout the year in the classroom and speak to us about the importance of community service. We end the school year with a visit to Meadow View to spend time with our pen pals.

**ACCOUNTING 1** (grades 10-12) (1 credit)

The course emphasizes the basic principles, concepts, and procedures of accounting that every student must understand for a maximum opportunity when entering the world of business. This course progresses from the simple to the complex. It begins with preparing simple balance sheets and continues to adjusting and closing entries for a merchandising business organized as a partnership. Instructional topics include: starting a proprietorship, debits/credits, posting to a general ledger, cash control systems, preparing a worksheet and financial statements for a merchandising business and recording adjusting/closing entries for a service business. Business simulations may also be used to enhance the learning process. This course can be taken for college credit at Berlin High School thru Penn Highlands.

**INTRO TO BUSINESS** (grades 10-12) (.5 credit)

This course examines the social, legal, ethical, economic and political interactions of business and society. This is a basic foundation for the student who will specialize in some aspect of business and will also provide the opportunity for students not pursuing business in the future to learn about the relationship and impact of business to a society in which they are citizens, consumers and producers. The class includes such topics as economic systems, government and business, ethics and law, social responsibility, globalization and international business concepts, principles and practices. This course can be taken for college credit at Berlin High School thru Penn Highlands.

**PRINCIPLES OF MARKETING** (.5 credit)

This course will focus on the major elements of the marketing mix, including demand, product planning, pricing, channels, and the logistics of dispersion and promotion. Principles, functions and current marketing issues will be discussed. Practical case studies will be used to enhance theory. Pre-Requisite: Introduction to Business. This course can be taken for college credit at Berlin High School thru Penn Highlands.

**CREATIVE WRITING** - (grades 11 & 12) (1.0 credit)

Creative Writing- This course is offered to students in grades 11-12 who not only have earned a B average (or higher) in their English class for the previous school year, but who also have a strong appreciation for literature and the art of writing. Through the daily close reading of classic and contemporary texts in a variety of genres (e.g., poetry, fiction, drama, and creative nonfiction), students will examine, explore, and discuss the creative process. Students will write and study the aspects of fiction (plot, point of view, characterization, conflict, etc.) and frequently compose and make revisions short stories.



## **GREEK MYTHOLOGY** (grades 10-12)

(.5 credit)

Try to imagine how you would feel during a severe thunderstorm if you had no clue what rain, storm clouds, thunder, or lightening was! Pretty terrifying, right? That's how it was for the ancient Greeks, so they created myths (stories that endure over long periods of time) to explain the mysteries of nature and to understand that which made no sense to them. Their myths, however, are not just old stories; they represent serious attempts to explain the world at large, and they still have relevance today. They can teach us some of life's big lessons. By studying some of these myths, people can learn how to control their actions, or at least think better of what they do. This semester-long course will provide a general overview of classical mythology and will focus on several mythological figures and their stories.

## **PUBLIC SPEAKING** (grades 10-12)

(.5 credit)

This semester course will provide instruction and experience in the preparation and delivery of speeches in the public setting. Emphasis will be on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion speeches. Upon completion of the course, students should be able to prepare and deliver well-organized speeches as well as demonstrate the speaking, listening, and interpersonal skills necessary to be effective communicators in varied settings. This course may be taken for college credit at Berlin Brothersvalley High School through Penn Highlands Community College.

## **HEALTH:**

### **BASIC HEALTH 9**

(.5 credit)

This course will help you understand yourself by examining self-esteem, values, pressures, stress, and choices/decisions. You will obtain background on eating disorders, tobacco, alcohol, drugs, and human sexuality. Your life now and in the future will be affected by decisions that you choose to make today. Responsible decision making is a must! (This is a required course for all 9<sup>th</sup> grade students)

### **DRIVER EDUCATION/FIRST AID** (grades 10-12)

(.5 credit)

Driver Education is taught the first quarter of the class time. In this class, students learn rules of the road, Pennsylvania driving laws and helpful hints on how to be a successful, safe driver. Behind-the-wheel driving is taught separately to students who have their permit or license. The second half of the semester the student takes First Aid. In this course, lifesaving skills such as CPR are taught and students gain insight into how to lead a safer life. Student must have 6.5 credits with a minimum GPA of 2.0.

### **ADVANCED HEALTH** (grades 11 & 12)

(.5 credit)

This is an in depth examination of adolescence, relationships, alcohol, drugs, sexuality, and parenthood. Topics include homesickness, suicide, dating, date-rape, problem/responsible drinking, drug use/abuse, conception, contraception, sexually transmitted infections, HIV & AIDS, parenting, childbirth, aging, and dying.

## **LANGUAGE:**

### **SPANISH I** (grade 9-12)

(1 credit)

Spanish I will give students an introduction to the Spanish language. They will learn several hundred vocabulary words focusing on giving basic information (introductions, greetings, time and date), school classes and activities, food and family. The grammar topics will focus mainly on using adjectives and articles and the present tense. Students will be expected to read, write, speak and listen at a beginner level. There will be several projects throughout the year as well as a midterm and final exam.

### **SPANISH II** (grades 10-12)

(1 credit)

Spanish II students are expected to build upon what they learned in Spanish I. The year will begin with a brief review. Vocabulary will focus on clothing, foods, places in the city, household rooms and chores, and sports and ways to stay healthy. Grammar topics will include many irregular verbs and the past tense. Students will be expected to read, write, speak and listen at a more advanced level than Spanish I. There will be several projects throughout the year as well as a midterm and final exam. Prerequisite: Spanish I

### **SPANISH III** (grades 11 & 12)

(1 credit)

Spanish III will continue to build on what the students have learned in the first two years of Spanish. Vocabulary will include technology, extending invitations, daily routine, vocation activities, courtesy, shopping in a market, and legends. Grammar topics focus mainly on the preterit (past) tense and the many irregular verbs of the preterit. Grammar topics will also include the present progressive, reflexive verbs and imperfect tense. Students will be expected to read, write, speak and listen at a more

advanced level than Spanish II. There will be several projects throughout the year as well as a midterm and final exam. Prerequisite: A "B" average or better in Spanish II. This course can be taken for college credit at Berlin High School through Penn Highlands.

**SPANISH IV** (grade 12) (1 credit)

Spanish IV will be a culmination of the previous three years of Spanish. We will start the year with a review of Spanish I through III. We will move through the chapters more quickly than in the past. Vocabulary will include ancient and modern Mexico, recipes and ingredients, specialty foods in Spain and restaurant phrases, movie phrases, newspaper, extended family, conservation and recycling, and future careers. Grammar topics will include the preterit and imperfect tenses, commands, and the future tense. Students will be expected to read, write, speak and listen at a more advanced level than Spanish III. There will be several projects throughout the year, journals and a midterm and final exam. Prerequisite: A "B" average or better in Spanish III. This course can be taken for college credit at Berlin High School through Penn Highlands.

**ACCELERATED SPANISH III** (grade 11-12) (0.5 credit)

In this semester long course, we will continue to build on what the students have learned in the first two years of Spanish. Vocabulary will include technology, extending invitations, daily routine, vocation activities, courtesy, shopping in a market, and legends. Grammar topics focus mainly on the preterit (past) tense and the many irregular verbs of the preterit. Grammar topics will also include the present progressive and imperfect tense. Students will be expected to read, write, speak and listen at a more advanced level than Spanish II. There will be several projects throughout the course as well as a midterm and final exam. Prerequisite: A "B" average or better in Spanish II. This course can be taken for college credit at Berlin High School through Penn Highlands.

**ACCELERATED SPANISH IV** (grade 11-12) (0.5 credit)

Accelerated Spanish IV will be a semester long culmination of the previous three courses of Spanish. Vocabulary will include ancient and modern Mexico, recipes and ingredients, specialty foods in Spain and restaurant phrases, movie phrases, newspaper, extended family, conservation and recycling, and future careers. Grammar topics will include the preterit and imperfect tenses, commands, and the future tense. Students will be expected to read, write, speak and listen at a more advanced level than Spanish III. There will be several projects throughout the course, journals and a midterm and final exam. Prerequisite: A "B" average or better in Accelerated Spanish III. This course can be taken for college credit at Berlin High School through Penn Highlands.

**MATHEMATICS:**

**ALGEBRA I A** (1 credit)

This full year course builds upon the mathematics learned in Pre-Algebra I. In this course, students will primarily explore lines and linear situations. They will solve linear equations and inequalities, graph linear equations and inequalities, be introduced to functions and function notation, learn to write equations for linear functions, and write and solve systems of linear equations and inequalities. In addition, they will be introduced to some fundamental concepts associated with operations with real numbers and expressions. The concepts of absolute value, radicals, and powers will be covered. This course is designed as a prerequisite course for Algebra IB and a preparatory course for taking the Keystone Algebra I test.

**ALGEBRA I B** (1 credit)

This full year course builds upon the mathematical concepts learned in Algebra IA. In this course, the content will focus around polynomial expression, operations with real numbers and algebraic expressions, and data analysis. The students will learn how to apply the four fundamental operations (addition, subtraction, multiplication, and division) to polynomial expressions. In addition, they will learn how to simplify radical expression, order real numbers, graph absolute value equations, and analyze data for patterns. The concepts of central tendencies (mean, median, mode, quartiles, and range), data displays, and probability will also be covered. This course is designed as a completion course for taking the Keystone Algebra I test and a prerequisite course for geometry.

**ALGEBRA I** (grade 9) (1 credit)

A course designed to broaden the minds of students. Topics include numbers as variables, finding and solving situations described by linear and exponential equations, dealing with positive and negative numbers, probability, proportions, and the use of technology to investigate and evaluate patterns.

**HONORS GEOMETRY/TRIGONOMETRY** (Grade 9) (1 credit)

Trigonometry topics in this year-long course include Pythagorean relationships, functions and their graphs, trigonometric functions, right triangle trigonometry, angles of rotation and radian measure, graphs of trigonometric functions, trigonometric formulas and identities, and polar coordinates. Projects typically require students to research topics beyond the scope of the textbook as well as across the curriculum and require the application of the concepts studied in the class to solve real world problems.

**ALGEBRA II** (grade 10) (1 credit)

This course emphasizes variation equations, functions, graphs, quadratic equations, matrices, systems, powers and roots. Students will study each concept in depth through applications and practical problems, providing opportunities to develop skills and to understand the importance of mathematics in everyday life. Prerequisites: Algebra I, Geometry.

**ALGEBRA II - HONORS** (10<sup>th</sup> grade) (1 credit)

This course is a more intense version of Algebra II. The pace will be faster (approximately 20%). This course emphasizes variation equations, functions, graphs, quadratic equations, matrices, systems, powers, roots, logarithms and trigonometric applications. Students will study each concept through applications, practical problems, and projects. Prerequisite: A "C" or higher in Honors Algebra I and Honors Geometry.

**GEOMETRY** (grade 11) (1 credit)

Students will explore characteristics of one, two and three-dimensional objects. The course emphasizes co-ordinate plane geometry, relationships of parallel and perpendicular lines, similar and congruent figures, properties of quadrilaterals, area and perimeter, surface area and volume, and circles as well as an introduction to right triangle trigonometry. Other topics may be covered as time permits. Prerequisite: Successful Completion of Algebra 1 or Algebra B."

**ALGEBRA III/TRIGONOMETRY** (grade 11 & 12) (1 credit)

This course is designed for students desiring to go to college or technical school. Many of the topics will be found in most college algebra courses. Topics include exponents, logarithms, polynomials, quadratic relations, statistics, right and oblique triangle trig., circular functions, sinusoidal variation and vectors. Pre-requisite: Students must have completed Algebra II course with a "C" or higher average.

**PRE-CALCULUS** (grade 11 & 12) (1 credit)

This course provides the opportunity for students to informally investigate the traditional concepts of calculus, such as maxima, minima, sequences and limits. In addition, students work with the algebraic manipulation they will need in future courses. Prerequisite: a "C" or higher in Algebra II.

**CALCULUS** (grade 12) (1 credit)

This course is designed for students demonstrating a strong interest and background in mathematics. Students will differentiate and integrate equations using a variety of rules. Students will then apply differentiation and integration to solve real-world applications. Prerequisite: Pre-calculus. This course can be taken for college credit at Berlin High School thru Mount Aloysius College.

**STATISTICS** (grade 11 & 12) (1 credit)

Statistics acquaints students with the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: 1) exploring data, 2) sampling and experimentation, 3) anticipating patterns, and 4) statistical inference. Students work on projects involving the hands-on gathering and analysis of real-world data. Ideas and computations presented in this course have immediate links and connections with actual events. The use of computers and graphing calculators allows students to focus deeply on the concepts involved in statistics. Prerequisite: Algebra II. This course can be taken for college credit at Berlin High School thru Mount Aloysius College.

**AP CALCULUS AB** (grade 12) (1 credit)

AP Calculus AB is a rigorous course designed to be comparable to calculus courses offered in colleges or universities. Students will analyze and apply functions, graphs, limits, derivatives and integrals. It is expected that students who take the AP Calculus course will seek college credit and/or placement. Students who take AP Calculus should have completed and mastered the topics presented in Algebra II, Geometry, and Pre-calculus. Teacher recommendation is required. **"Students who plan on**

taking the Advanced Placement exam are responsible for all costs related to taking the exam. This includes a penalty fee if the student decides not to take the exam once ordered."

## **PHYSICAL EDUCATION:**

### **PHYSICAL EDUCATION** – (grade 9) (5 credit)

Students will demonstrate an appropriate level of physical fitness; a positive attitude toward physical activity; a knowledge and understanding that participation in a variety of physical activities can lead to life-long physical fitness; basic skills related to a variety of physical activities; positive social and emotional behavior; and understanding of how participation in physical activities contributes to healthful living; a value on physical activity as a means of self-realization and fulfillment; and to value healthful life styles. (This is a required course for all 9<sup>th</sup> grade students)

### **PHYSICAL ACTIVITY** – (grades 10-12) (5 credit)

The students will actively participate in activities that develop and contribute to lifelong fitness goals. The activities will involve individualized cardiovascular aerobic work-outs, flexibility, muscular strength training and lifetime physical activities. The students will demonstrate knowledge and appreciation of the required activities, proper techniques, fundamentals and safety factors associated within this program. The students will work towards an increased level of overall fitness and an understanding of how participation in conditioning activities can contribute to a healthy lifestyle. They will develop self-confidence, improve self esteem, and create positive social interactions throughout a variety of physical activities. This class will prepare them for an actively fit lifestyle which can carry over into their adult lives.

### **WEIGHT TRAINING/EXERCISE PHYSIOLOGY** (grades 10-12) (.5 credit each semester)

Students will engage in a personal fitness program and demonstrate improved strength and muscular endurance; cardiovascular efficiency; muscular power; willingness to participate in a variety of physical activities; the value of a life-long fitness program; safety; and improved respect for a healthful life style. Students may study from one of the three areas in exercise physiology: Adaptations to training, enhancing performance, or physiological problems for the athlete. Students must participate in at least one after school sport and get the teachers signature to be eligible to enroll in this class

## **TECHNOLOGY/ENGINEERING EDUCATION:**

### **INTRODUCTION TO TECHNOLOGY/ENGINEERING** (grades 9 and 10) (1 credit)

The student will be involved in an integrated, laboratory and experience based instructional program designed to prepare him/her to be knowledgeable about technology; its evolution and cultural significance. The student will have experiences in the application of science and math concepts in technological systems in areas such as, but not limited to, construction, manufacturing, communications, and transportation. Students discover, create, solve problems, and construct using a variety of tools, machines, computer systems, materials, and processes.

### **COMPUTER AIDED DRAFTING I (CAD I)** (grade 10-12) (.5 credit)

This course involves the use of computer software and hardware as applied to mechanical design and drafting. Students will learn to manipulate basic geometric entities (points, lines, and arcs) to create 2-D and 3-D wire frame models. Experiences dealing with dimensioning level/layer surfaces and planes are also explored. Students will complete numerous mechanical drawings using problem-solving skills that are applicable to everyday life and work. Students will also identify career opportunities related to CADD and the required education preparation. Course length is 18 weeks. (Maximum class size of 20 students). This course can be taken for college credit at Berlin High School thru Penn Highlands.

### **COMPUTER AIDED DRAFTING II (CAD II)** (grade 11-12) (.5 credit)

This course will introduce the students to Autodesk's newest 3-D modeling software Inventor. It is targeted for the beginning user who has little or no experience designing in 3D. This course teaches the student how to navigate Inventor's toolbars and menus; create basic 3D parts using Extrude, Revolve, Sweep and Loft, apply and edit dimensions and constraints. Students will also create basic drawing layouts and build assembly models using top down and bottom up approaches. Course length is 18 weeks. (Prerequisite: CAD I and Architectural CAD) (Maximum class size of 19 students). This course can be taken for college credit at Berlin High School thru Penn Highlands.

### **ARCHITECTURAL CAD** (grade 10-12) (5 credit)

This course will introduce students to residential drafting/design and provides basic information necessary for planning various types of dwellings. It presents basic instruction in preparing architectural drawings using the Auto Desk software of AutoCAD

and Revit and various other software. Students taking this course will develop the necessary technical skills to communicate architectural ideas in an understandable efficient and accurate manner. Course length is 18 weeks. (Prerequisite: CAD I) (Maximum class size of 19 students)

### **COMPUTER AIDED INTEGRATED MANUFACTURING (CNC)** (grade 12) (.5 credit)

Students taking this course will be introduced to the procedures of programming numerically controlled equipment. Students will use various programs to perform numerous activities related to CNC machines. Students write programs following a machine format detail, using Cartesian coordinates for motion command and incorporating preparatory and miscellaneous commands necessary to manufacture parts on a machining center. Course length is 18 weeks. (Prerequisites: Computer Aided Drafting I) (Maximum class size of 19 students)

### **APPLICATIONS OF TECHNOLOGY EDUCATION** (grade 12) (.5 credit)

Students will be required to plan, design, construct and evaluate an individual or group project of their liking, using the skills obtained in Technology Education. Students will be required to design a project using computer aided design software as well as complete a daily log of their progress. Students must research their project topic and complete a paper pertaining to their findings. Students must cover the cost for project materials. Course length is 18 weeks. (Prerequisites: CAD II and Manufacturing Systems or Construction Systems) (Maximum class size of 15 students)

### **MANUFACTURING SYSTEMS** (.5 credit)

This is a course in which students analyze the technical systems, historical evolution and various types of manufacturing. Students will examine the various impacts required for manufacturing, experience a variety of manufacturing processes, produce and investigate manufacturing outputs and evaluate manufacturing impacts. Students will participate in problem solving as they identify, design and produce products in a manufacturing technology laboratory.

### **ENGINEERING DESIGN** (Grades 11 & 12) (.5 credit)

This course is designed to challenge, promote and develop creativity through hands-on activities; Students will develop a better understanding of why engineers use a wide variety of materials for products by building prototypes and testing their designs. A variety of STEM (Science, Technology, and Engineering & Mathematics) problem solving activities, projects and instructional approaches will be provided to enable students to demonstrate their abilities to solve problems efficiently and effectively. Students use 3D design software to design and document solutions for the course activities. The safe use of tools & machines will be taught and reinforced as students complete activities. Activities may include: Inventor 3D designs, Mousetrap vehicles, CO2 car dragster, bottle rockets, boat hull designs, hydraulic robotic arm, and Solar & Maglev vehicles.

This course is designed for 11th or 12th grade students.

(Prerequisites: Physics or currently taking Physics)

## **SCIENCE:**

### **BIOLOGY I** (grade 9)

An introductory course designed to provide a broad education in the fundamentals of biology (cell biology, bioenergetics, chemical basis for life). This course, in combination with Genetics and Ecology, prepares students for choosing more advanced courses in the biological sciences, (anatomy/physiology, microbiology, paleontology, and genetics). A variety of instruction, including labs, will be used to cover and reinforce key topics. This course is constantly evolving based on real-world events. Biological topics in the news (medical treatments, agricultural techniques) are incorporated in the course to show the student biology's direct connection to their everyday lives.

### **BIOLOGY II** (grades 11 & 12) (1 credit)

This is a more intense version of the standard biology course. It is designed for students who have a strong interest in the sciences; biology, biochemistry, medicine, agronomy. The content of this course will follow a more traditional approach with the idea of preparing students for post-secondary work in the sciences. The pace will be faster (approx. 30%) so that a broader range of material and experiences can be gained. Exercises may be of a more quantitative nature to give a more experimental feel to the course. Students taking Bio II are eligible for Dual-enrollment through Mount Aloysius. Prerequisite: C or higher in Academic Biology.

### **CONSUMER CHEMISTRY** (grade 10-12) (1.0 credit)

Chemistry is all around us and used by virtually everyone, regardless of his or her vocation. This is the most elementary Chemistry course offered here at BBHS. This class will introduce you to the "Basics of Chemistry" that are now aligned with the new "common core" standards. Each section will present terms and concepts in the best way for your understanding and

retention of the topics discussed. The class will be conducted in such a way that a student with minimal science background can successfully complete the class if they apply themselves and complete all assignments to a satisfactory level of achievement.

**CHEMISTRY AND LAB** (grades 10-12) (1.4 credit)

This is an introduction course to chemistry designed for students planning on attending 4 YEAR COLLEGE ONLY. It also will introduce you to the "Basics of Chemistry" that are now aligned with the new "common core" standards. Students use their advanced math skills and problem solving techniques to learn the basics of chemistry. This course also includes a lab period two days per week.

**HUMAN ANATOMY/PHYSIOLOGY** (grades 11 & 12) (1 credit)

This course is designed to appeal to students interested in any aspect of the medical profession as well as cosmetology, daycare, medical secretary, etc. Topics covered are aimed at these areas to expose students to various career opportunities. All aspects of human structure and function will be covered, and physical identification is required. This is a college-level class, so more material will be covered in a shorter time period and grading is more intensive. Prerequisite: C or higher in Academic Biology

**ANATOMY/PHYSIOLOGY WITH LAB** (grades 11 & 12) (1.4 credit)

This course is designed to appeal to students interested in aspects of the medical or health care profession. It is an introduction to the organization of the human body at its molecular, cellular, and tissue levels. All aspects of structure and function will be covered, and physical identification is required. Dissections and other laboratory activities are also a significant part of the class. Pre-requisites include Academic Biology and Academic Chemistry. Dual-enrollment through Mount Aloysius is suggested, but not required.

**PHYSICS WITH LAB** (12<sup>th</sup> grade students and also 11<sup>th</sup> grade honors students) (1.4 credit)

This course is designed for students desiring to go to college or technical school, especially those intending to major in science and math fields. Topics covered include mechanics, nuclear physics, heat and energy, wave theory, and DC electrical circuits. Prerequisites: Students must have at least a "C" average in Academic Chemistry and a minimum of Algebra II (should have had some trigonometry). This course can be taken for college credit at Berlin High School thru Mount Aloysius College.

**CHEMISTRY II** (grade 11 & 12) (1 credit)

This course continues where Chemistry/Lab left off. It is designed for students planning on attending 4 year college or accredited junior college only. Students use their advanced math skills and problem solving techniques in combination with their previous chemistry knowledge to further their understanding of chemistry. Topics will include additional gas laws, stoichiometry, equilibria, properties of solutions, kinetics, intro to biochemistry, and intro to organic chemistry. Prerequisites: "C" or better in the following courses - biology, algebra I, geometry, and chemistry/lab. This course can be taken for college credit at Berlin High School thru Mount Aloysius College.

**PRINCIPLES OF TECHNOLOGY** (grades 11 & 12) (1 credit)

Principles of Technology is a high school course in applied science and math for students who plan to pursue careers as technicians or work in a trade profession. It is a course that blends an understanding of basics and principles with practice. It is a course that builds a firm foundation for understanding technology. We will be exploring the concepts of force, work, rate and resistance in the areas of mechanics, fluids, electrical and thermal systems. Students should have a good foundation in algebra 1 in order to take this course.

**AP BIOLOGY** (grades 11 & 12) (1 credit)

Advanced Placement Biology is modeled after a two-semester college introductory biology course that follows the curriculum designated by The College Board. AP Biology a fast paced, in-depth study of many of the fields of study in the biological sciences, and is built around a new framework that organizes biology into four big ideas. Students are asked to integrate detailed information regarding biological processes into broader thematic schemes. Students will develop analytical and laboratory skills necessary to investigate modern biology issues. The range/depth of covered material and the type of work required of students differs significantly from a typical high school biology course. Lab activities, technical reading/writing, and exams will be demanding, cover large amounts of material, and require significant work outside of class. Material will be delivered through traditional lecture, small group discussions, and hands-on labs. Students will be evaluated with frequent short quizzes, in-class assignments, homework, essays, lab reports, and major tests. Students successfully completing this course should have a working knowledge of biology at the collegiate level. Students considering AP Biology should be academically

motivated and science-oriented. Completion of Academic Biology and Chemistry is recommended. Please check The College Board website to check AP policies of colleges you may be considering before enrolling.

## **SOCIAL STUDIES:**

### **WORLD GEOGRAPHY** (grade 9) (1 credit)

Students will be exposed to the basics of geography at the onset of the course. Once basic skills have been attained, students will then be given instruction on all of the major continents and the countries within. This course will be a journey around the globe using various formats: lecture, video, book, class discussion, computer, and a touch of the imagination. Along with actual geography, students will cover cultures and traditions and how they each help shape the environment in which humans live.

### **WORLD HISTORY (1500s-20<sup>th</sup> Century)** (grade 10) (1 credit)

This course will feature a survey approach to the major periods and events that occurred from the end of the middle ages to the twentieth century. The period of the Modern Era is commonly used to describe this era. The course will develop as the means by which human beings have made a transition to modern times. The course will demonstrate the formation of Europe and the Colonial World. The Age of Empires and the rise it gave to Nationalism as well as the Industrial Revolution will be highlighted. The student will be able to understand the evolution of the Modern Era and be able to better understand the world at present.

### **AMERICAN HISTORY** (grade 11) (1 credit)

The first semester covers American History from Reconstruction following the Civil War to and including WWI. Additional topics are settlement in the Mid-West, Indian Wars, Industrial Revolution, Urbanization, and Immigration, Unionism, Political Corruption, Populism, Imperialism, Spanish-American War and Progressivism. Second semester covers American History from the Age of Normalcy to the most recent events in the United States. Additional topics include the "Roaring Twenties", Great Depression, New Deal, WWII, Cold War, Korean Conflict, New Frontier, Vietnam Conflict, Segregation and Integration and War in the Gulf.

### **GOVERNMENT & PERSONAL FINANCE** (grade 12) (1.0 credit)

For a semester, we will cover the formation of the U.S. government. We will focus specifically on the Constitution; the 3 branches, Bill of Rights and the amendments. As American citizens, students will be able to analyze & understand the processes by which they are governed. For a semester, we will begin with the basics of Economics, i.e. Macro versus Micro. Then we will delve into personal finance in which we will cover topics such as banking, credit, loans, savings and taxes.

### **AP HISTORY 10, 11 & 12<sup>th</sup> grade - UNITED STATES HISTORY** (1.0 credit)

Following the College Board's suggested curriculum designed to parallel college-level History courses, AP United States History challenges students to prove an in-depth knowledge of the events of our nation's rich past in a way that will expose them to growth of their own their disciplinary practices and reasoning skills. This course emphasizes critical thinking within the context of the main issues and documents of U.S. history as well as developing the skills necessary to arrive at conclusions on the basis of an informed judgment. AP students are expected to work at an accelerated pace and must be willing to complete work outside of the classroom setting. Students must exhibit a "B" average in previous history courses, complete required summer assignment(s), and may be asked to provide a teacher recommendation in order to take this course.

## **SOMERSET COUNTY TECHNOLOGY CENTER EDUCATION:** For students in grades 10-12

### **AUTOMOTIVE BODY TECHNOLOGY** (3 credits)

This auto body course offers training in collision repair and refinishing of damaged automobile and truck bodies and frames using the cutting edge tools and materials available in the trade. Learning experience includes damage diagnosis, uni-body and frame repair, straightening and shrinking sheet metal, panel and glass replacement, paint mixing and refinishing techniques. Upon graduation students are ready for an entry-level position in the auto body repair field or an advanced apprenticeship.

### **AUTOMOTIVE TECHNOLOGY** (3 credits)

Through theory and actual laboratory experience, students receive the training needed to troubleshoot, analyze, and repair malfunctioning gasoline engines. This course also prepares students for the PA State Safety Inspection Mechanic Test that is given at the end of the senior year. Areas of training include basic vehicle service, engine performance, engine repair, suspension and steering, brakes, electrical/electronic systems, heating and air conditioning, automatic transmission, and manual drive train and axles. Instruction is based on the NATEF/ASE task list, and NATEF certification of the shop is pending.

## **CARPENTRY (MILLWORK)**

(3 credits)

Students receive competency-based skill instruction including wood framing and wood construction and installation of doors, frames and windows. Blueprint reading and estimation are also included. In the millwork phase of the program, students learn to construct cabinets and component parts. Related occupations include carpentry, home remodeling, cabinet making, siding and roofing, construction work, and building contracting.

## **COMPUTER NETWORKING**

(3 credits)

Students in Computer Networking are preparing for employment in a variety of careers including but not limited to network Administrator, Network Technician, Computer Support Technician, and Systems Engineer. Students will begin by learning the basics of computer hardware, operating systems, and peripherals. They will learn physical networking to include routers, switches and cabling. Also, students will have the opportunity to obtain Microsoft A+, Network+ and Cisco certifications.

## **COSMETOLOGY**

(3 credits)

Within this three-year course, students receive training in the various beauty profession services, state law requirements, and the commercial aspects of cosmetology. Learning experience includes administering facials, manicures and artificial nail services, cutting, styling, bleaching, tinting and perming hair. In preparation for state licensing, students are also taught hygiene and sanitation, anatomy and physiology, and state laws concerning cosmetology. Emphasis is also directed to human relations and business procedures relevant to the profession.

## **DENTAL ASSISTING**

(3 credits)

Students who complete the Dental Assisting curriculum can earn college credit. SCTC's Dental Assisting Program has an agreement with Westmoreland Community College in addition to other colleges across Pennsylvania through the SOAR program.

## **DRAFTING AND DESIGN TECHNOLOGY**

(3 credits)

Drafting is the primary means of communicating technical ideas through the use of computers and software. As our nation continues to grow technologically, the demand for drafting technicians for both regular industry as well as the entertainment industry will continue to increase. Student initially learn the fundamentals of drawing, then progress into areas of specialization such as technical drafting, architectural drafting, civil engineering and surveying as well as animation for the entertainment industry. Students are also trained to operate CADD (Computer-aided Drafting and Design) systems. CADD is an integral part of the program as is 3D modeling and animation software and enables graduates to be more competitive in job placement opportunities. Upon completion of this program, students are prepared for entry-level drafting and design positions and/or for post-secondary education that can lead to a high skill, high wage career.

## **ELECTRICAL OCCUPATIONS**

(3 credits)

This course involves practices that include the three major branches of the electrician's trade: residential, commercial, and industrial. The student who has a basic background in math and science will begin with basic electricity and progress to learning a new language that starts with the simple atom and progresses into voltage, current, resistance, and wattage.

## **FOOD PREPARATION AND SERVICE (CULINARY)**

(3 credits)

Food service students learn the main functions of ordering, preparing, cooking, and serving food in restaurants, snack bars, cafeterias, hotels and institutions. Instruction includes practical experience in the school restaurant where they study the following occupations: chef, cook, baker, salad maker, line worker, cake decorator, waiter/waitress, and cashier. Special emphasis is placed on safety, sanitation, restaurant management, menu planning, and nutrition. Upon graduation, students are prepared for entry level positions or for higher education in colleges or culinary schools.

## **FORESTRY**

(3 credits)

The demand for wood and wood products has created the need for skilled lumber workers. The forestry program is designed to train students in woodland care and management which includes logging, cutting, planting, and marketing of wood and wood products. The course also covers skills involved in sawing, drying, and grading lumber. As part of their course work, students will use a GPS/GIS system and handheld computers. Increased national emphasis on ecology and conservation of natural resources has created the need for forest management personnel. Career opportunities also exist in related environmental sciences.

## **MACHINING TECHNOLOGY**

(3 credits)

Machine Shop provides students with an excellent background in mechanical operations for today's modern machine tool industry. The course is organized to offer competency-based instruction in the following areas: operation of a variety of



machines; use of measuring tools, gauges, instruments; computerized numerical control programming and operation; blueprint reading, and application of mathematics. Employment for machinists has traditionally been excellent and is forecast to remain excellent in the future as demand increases for highly skilled personnel.

### **MASONRY**

(3 credits)

Employment and excellent financial rewards are readily available to successful masonry students. This three-year course offers instruction in brick and block-laying fundamentals such as mortar mixing, use of a masonry saw, scaffold building, blueprint reading and estimating. Brick paving, fireplace construction, stone masonry and the pouring and finishing of concrete are also covered.

### **MEDICAL ASSISTANT/HEALTH OCCUPATIONS**

(3 credits)

Students are provided course work to prepare them for employment as a nurse aide or as a medical office assistant. In addition, they are introduced to a wide variety of highly employable paraprofessional careers. Students receive instruction and participate in activities designed to help them develop practical medical and safety skills. Clinical and/or cooperative education experiences are available with hospitals, nursing homes, and other appropriate health care agencies. Graduates go directly into several entry-level positions in the medical and nurse assisting occupations, or they can continue their education at a college or medical facility.

### **OCCUPATIONAL CHILD CARE**

(3 credits)

This program covers human growth and development, health and safety, DPW regulations, nutrition, guidance and discipline, career and professional development, and activity planning. Students learn through both classroom experience and practical application in the preschool facility. Career opportunities include child care aide, assistant group supervisor, teacher's aide, nanny, day care operator. Industry certifications include First Aid, CPR, Child Development Associate and Assistant Group Supervisor.

### **WELDING**

(3 credits)

The welding course is designed to allow students to reach their highest level of achievement in oxy-fuel welding, brazing, shielded metal arc welding, gas tungsten arc welding, gas metal arc welding, and cutting using the oxy-fuel and plasma arc processes. Basic blueprint reading, safety precautions, and proper use of power equipment are also taught. Students have the opportunity to participate in activities sponsored by the American Welding Society.

## **ALLEGANY COLLEGE OF MARYLAND COLLEGE COURSES:**

(Note: These courses are offered to selected students who are 16 or older. Parents and students will be billed for tuition at a rate to be established by the college offering the course.)

### **INTRODUCTION TO SOCIOLOGY**

(.5 credit)

This one semester course is offered by Allegany College of Maryland at BBHS every other year. Students also earn 3 college credits for the course. This basic course in sociology is an overview of principles of sociology using empirical knowledge and the application of the scientific method. Review of basic principles of social interaction, social roles, organization, processes, stratification, social change, group dynamics, and valuation will be done.

### **FRESHMAN ENGLISH**

(.5 credit)

This one semester course is offered by Allegany College of Maryland at BBHS every other year. Students also earn 3 college credits for the course. The students are introduced to the different modes of exposition, i.e.; description and narration. The brief essay is also emphasized. Students are instructed in the use of the library and basic research tools. A final essay and objective examinations are required.

### **COMPUTER TECHNOLOGY 101 (COMPUTER LITERACY)**

(.5 credit)

This one semester class is offered by Allegany College of Maryland at BBHS. Students also earn 3 college credits for the course. Students will acquire and/or demonstrate proficiency understanding basic computer terminology, using basic operating system features, e-mail, Internet, word processing, spreadsheet, database and presentation software.

### **HISTORY OF WESTERN CIVILIZATION**

(.5 credit)

The development of Western Civilization and its worldwide influence. Emphasis on the evolution of military, political, social, and economic institutions as well as the cultivation of arts (prehistory to 1500).