

# Palmyra Area High School

## Course Catalog 2019 - 2020



**1125 Park Drive**  
**Palmyra, PA 17078**  
**717-838-1331**  
**717-838-7915 (fax)**  
*www.pasd.us*

## **INTRODUCTION**

Greetings and welcome to Palmyra Area High School! This Student Course Planning Guide has been published to assist students and parents in selecting an educational program that best fits each student's unique educational skills, talents and interests. Please take some time to review the contents so you can plan for a successful and meaningful high school experience. When making course selections, students should think about how their choices blend with their interests and abilities and lead to preparing oneself for life after high school. If you have any questions about any information printed in this catalog, please call the Palmyra Area High School Guidance Office at 838-1331.

### **Please note:**

Eleventh grade students who are not proficient on the Keystone Exams (in Literature, Biology, or Algebra) will be required, without exception, to be scheduled into a remediation class for their specific area of need. As per PA Chapter 4 Guidelines, students who do not score proficient or advanced on the Literature, Biology, and/or Algebra I Keystone exam by the end of their junior year, will be required to successfully complete the state-mandated project-based assessment in respective area of non-proficiency in order to graduate.

### **High School Administration**

Dr. Scott Richardson – Principal  
Mr. Daryl Reisinger – Assistant Principal  
Mr. Paul J. Steigerwald – Assistant Principal

### **High School Counselors**

*Students assigned by first letter of last name (-)*

Mrs. Jennifer Kulas – (A-E)  
Mr. David Watson – (F-K)  
Mrs. Jennifer Hilbert – (L-R)  
Ms. Teresa Markulike – (S-Z)

The Palmyra Area School District will not discriminate in its educational programs, activities, or employment practices based on race, color, familial status, age, creed, religion, gender, sexual orientation, ancestry, national origin, handicap/disability, or any other characteristic protected by law. This policy is in accordance with federal and state laws including Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, and the Pennsylvania Human Relations Act. The following person has been designated to handle inquiries regarding the nondiscrimination policies: Darcy Brenner-Smith, Compliance Officer ([darcy\\_brenner-smith@pasd.us](mailto:darcy_brenner-smith@pasd.us)) and/or Dr. Bernie Kepler Title IX Coordinator ([bernie\\_kepler@pasd.us](mailto:bernie_kepler@pasd.us))

## GRADUATION CREDIT REQUIREMENTS

Course	PHS Students	CTC Students
English Language Arts	4	4
Math	4	4
Science	4	3
Social Studies	4	3
Computer Technology	1	1
Career/Financial Lit.	1	1
Phys. Ed.	1.5	1
Core Electives (ELA, Math, Science, or SS)	4	2
Health	1	1
Driver Ed./Career Ed.	.5	.5
Electives	12	3.5 or 4.5 + 6 from CTC = 9.5 or 10.5
<b>Total Credits Required for Graduation</b>	37	31
<b>Total Credits Possible</b>	40	34

All students in grades 9-11 will be required to take at least one class in each of the four core content areas each year (English Language Arts, Math, Science, and Social Studies.)

**Note:** Counselors and teachers will work with students concerning course selections. Students are, however, required to monitor his/her own progress towards graduation.

### NCAA Division I Requirements

Students must graduate high school and meet **ALL** the following requirements:

- Complete **16 core courses**:
  - Four credits of English
  - Three credits of math (Algebra 1 or higher)
  - Two credits of natural/physical science (including one year of lab science)
  - One additional credit of English, math or natural/physical science
  - Two credits of social science

- Four additional credits of English, math, natural/physical science, social science, or world language
- Complete **10 core courses**, including seven in **English, math or natural/physical science**, before the seventh semester. Once students begin their seventh semester, they may not repeat or replace any of those 10 courses to improve their core-course GPA.
- Earn at least a **2.3 GPA** in their core courses.
- Earn an SAT combined score or ACT sum score matching their core-course GPA on the Division I sliding scale, which balances their test score and core-course GPA. If students have a low test score, they need a higher core-course GPA to be eligible. If they have a low core-course GPA, they need a higher test score to be eligible. If they have a low core-course GPA, they need a higher test score to be eligible.

For more resources regarding these changes, visit [NCAA.org/student-athletes/play-division-i-sports](http://NCAA.org/student-athletes/play-division-i-sports) or the [Division I Academic Requirements Guide](#).



### **Guidelines for Honors Level and AP courses:**

Students considering enrolling in Honors Level courses should consider the following:

- Honors level courses are highly rigorous and are designed for highly motivated and academically competent students.
- Students taking Honors level courses should consider their past academic performance. In general students whose grades are typically above 80% in prerequisite Honors course and 90% in prerequisite College Preparation course may consider Honors level course work.
- Students taking AP courses will need to decide if they are taking the AP Exam in the fall. Exam registration, payment, and ordering will take place during first semester. Any student who cancels an exam will be assessed a fee.

### **Differentiated Grading System/Weighted Courses**

#### **Art**

AP Studio Art 1.10

#### **Business/Computer**

AP Computer Science A 1.10

Honors Accounting II 1.05

Honors Programming 1.05

#### **English Language Arts**

AP English Language /Comp. 1.10

AP English Literature/Comp 1.10

English Composition I HACC 1.10

Honors American Literature 1.05

Honors British Literature 1.05

Honors English Language Arts 10 1.05

### **Mathematics**

AP Calculus AB	1.10
AP Calculus BC	1.10
AP Statistics	1.10
College Algebra HACC	1.10
Honors Geometry	1.05
Honors Pre-Calc.	1.05

### **Science**

AP Biology	1.10
AP Chemistry	1.10
AP Physics I: Algebra-Based	1.10
Chemistry 100 HACC	1.10
Environmental Science HACC	1.10
Honors Biology	1.05
Honors Chemistry	1.05
Honors Physics	1.05

### **Social Studies**

AP Macroeconomics	1.10
A.P. Microeconomics	1.10
A.P. Psychology	1.10
US History (A) - HACC	1.10
US History (B) - HACC	1.10

### **World Languages**

Honors Level III	1.05
Honors Level IV	1.05
Honors Level V	1.05
World Language - College Level	1.10

**The following classes will be graded Pass/Fail: Jazz Ensemble, Chamber Choir, Chamber Orchestra, Marching Band, and Support Class. A passing grade will not impact GPA; a failing grade will impact GPA.**

### **Grade Promotion Requirements**

**Promotions to the next grade are governed by the following requirements:**

- 10th Grade: 9 earned credits
- 11th Grade: 18 earned credits
- 12th Grade: 27 earned credits

### **Requirements for Marking Period Honor Rolls**

**Regular Honor Roll** - Grade Point Average of 3.0 to 3.699. All students must have earned grades of 80% or higher.

**Distinguished Honor Roll** - Grade Point Average of 3.70 or higher. All students must have earned grades of 90% or higher.

### Palmyra High School Grading Scale = Honor Roll Points Conversion:

93% - 100%	A	4.00
90% - 92%	A-	3.67
87% -89%	B+	3.33
83%-86%	B	3.00
80%-82%	B-	2.67
77%-79%	C+	2.33
73%-76%	C	2.00
70%-72%	C-	1.67
67%-69%	D+	1.33
63%-66%	D	1.00
60%-62%	D-	.67
59% and below (50%)	F	.00

### Course Prerequisites

All course prerequisites are listed at the bottom of the course description and assume a passing grade in the prerequisite course listed.

### User/Lab Fees

The Palmyra Area School Board has approved a user/lab fee of \$20.00 for 1.0 credit courses. A \$20.00 one-time music fee (for all music ensemble courses regardless of the number of music courses taken) will be required. Students will be informed of the date user fees are due to be paid to the classroom teacher. This will be done by semester. The teacher is responsible for the collecting, recording and submitting of fees to the high school office for deposit. All fees are deposited back into the district's general fund for disbursement at the school board's discretion.

### DUAL ENROLLMENT, EARLY GRADUATION, AND COUGAR ACADEMY GUIDELINES

**Palmyra Area School District Board Policy #217 (Graduation Requirements) provides students with opportunities to attend college on a part-time basis as a junior or senior or graduate early from high school.**

#### **To Access These Programs:**

In addition to being academically eligible, the student would be required to:

- Meet the entrance requirements of the college or university
- Pay all costs associated with college enrollment including registration, tuition, dues, fees, textbooks and transportation.

#### **Early College - Concurrent Enrollment (Part-time):**

Students can attend college part-time or full-time during their junior and senior years while also attending the high school. Some college courses may also be used to satisfy high school graduation requirements with approval of administration. Although students choosing this option are not eligible for federal financial aid, many of the colleges with which the school is seeking agreements offer credits at a substantially reduced rate of half or less per credit hour. Students should consult with their School Counselor if interested in the Early College option.

### **Early Graduation (Graduation in 3.5 Years):**

Students who complete 37 credits (including the required credits in each of the content areas) by the conclusion of the first semester of their senior year are eligible to graduate. This can be completed by students completing two additional credits, at their own cost and on their own time, prior to the end of the first semester of their senior year. Students who wish to graduate early must plan carefully and closely consult with their counselor to ensure all required course work is completed successfully and that appropriate deadlines are met. Listed below is a link to additional information, including courses available, regarding our early graduation program. With this option, students are considered high school graduates and are eligible to apply for and potentially receive federal financial aid for college contingent upon meeting state and federal deadlines for financial aid. Students who graduate after the first semester may still attend the Prom, but may not participate on athletic teams during the second semester. Students should consult with their School Counselor if interested in the Early Graduation option.

### **Cougar Academy**

The Cougar Academy is Palmyra's online school for students in K-12. Students can choose to take courses online at home or develop a hybrid schedule, with some classes in the building and the rest at home or in the Cougar Academy room with teacher support. Cougar Academy students earn a Palmyra diploma and can participate fully in Palmyra activities and athletics. Students interested in any Cougar Academy courses, or for more information on the Cougar Academy, must contact Mrs. Knudsen, Supervisor of Instructional Technology and Online Learning at [kim-kathie\\_knudsen@pasd.us](mailto:kim-kathie_knudsen@pasd.us). Requests for any of these classes will not be accepted after the course request window closes.

### **CA0270 Cougar Academy Career and Financial Literacy**

1 credit

During the first half of this course, students will expand upon the 10<sup>th</sup> grade Career Education course and further explore their career choices by developing a career strategy, exploring workplace expectations, developing a plan for a school-to-work transition, and preparing for lifelong learning. Students will develop and present an Electronic Career Portfolio to showcase their achievements, growth, vision, reflection, skills, experience, training, and career goals. The second half of the course will focus on an increased understanding of financial literacy. During this part of the course, students will study earning and reporting income, managing finances and budgeting, saving and investing, buying goods and services, banking and financial institutions, and using credit. This version of the course will be completed online.

\*Students may choose to complete this course in a traditional classroom and/or at home with parent and administrative permission. Completing one version of the course is required for all students in grade 11. Requests for this class will not be accepted after the course request window closes.

### **CA0200 Cougar Academy Physical Education** - Grades 11, 12

.5 credit

Cougar Academy Physical Education is designed primarily for the 11<sup>th</sup> grade student who has taken 2 classes in physical education/ aquatics/ lifeguarding classes. Students are required to complete a written, self-created 10- week fitness program complete with long and short term goals, times, durations and lists of exercises proposed for completion during the semester of the class. Students will then be required to implement this routine over the course of semester in the form of an activity log including 60 hours of accountable activity, monitored by the instructor, related to the routine they have created. Students will be required to complete an end of course reflection on their semester of physical activity and relate it to their ongoing attempts to remain physically active. Grading for this class is on a pass/ fail basis.

Requests for this class will not be accepted after the course request window closes.

**CA0160 Health Education II** - Grades 11, 12

.5 credit

Topics for Health Education II include: health and your wellness, mental and emotional health, promoting safe and healthy relationships, substance abuse, disease prevention, and the reproductive system. There is a cumulative final examination for Health.

Requests for this class will not be accepted after the course request window closes.

**CA0070 Cougar Academy Current Events** - Grades 11, 12

1 credit

In this online course students will become aware of the major issues and divisive topics of the day and develop an in depth understanding and appreciation of current events. The focus of the class will be on current events and on divisive issues that affect the student as a resident of the World and the United States. The class follows weekly current events and students will be expected to understand the social, political and economic issues on a daily basis. Each week, the class will focus on a divisive topic and research the opposing viewpoints on an issue in order to form an individual opinion. The objectives of this course are: to enhance the student's understanding of national and world events, to encourage students to be informed citizens, and to help them to make intelligent opinions on controversial topics that divide Americans today.

Requests for this class will not be accepted after the course request window closes.

**CA0550 Cougar Academy World History: A Global Perspective** - Grade 11



1 credit

World history seeks a global perspective on the past, one that acknowledges and integrates the historical experiences of all of the world's people. Only by examining humanity's shared past is it possible to view today's world in meaningful historical context. This course focuses on global historical patterns looking for significant connections across both time and geographical space to employ a thematic approach to understanding today's world. Students will explore how the processes of world history have drawn peoples of the world together and how the patterns of world history also reveal the diversity of the human experience. Students will use a variety of print and non-print sources to analyze current real-world problem, environmental and societal issues with appropriate historical narrative. Students will develop critical thinking skills and perspectives to better understand the many complexities in today's world.

Requests for this class will not be accepted after the course request window closes.



## CORE SUBJECT COURSE SEQUENCE

### English Language Arts Curriculum Sequence

Pathway	8th	9th	10th	11th	12th
<b>English Language Arts</b>		CP English Language Arts 9  *Literacy Standards 9	CP English Language Arts 10  *Literacy Standards 10	English Language Arts 11  *Literacy Standards 11	English Language Arts Elective
<b>College Prep. English Language Arts</b>	8 <sup>th</sup> grade English Language Arts (Grade below 90%)	CP English Language Arts 9  *Literacy Standards 9	CP English Language Arts 10  *Literacy Standards 10	CP American Literature  Contemporary Literature  *Literacy Standards 11	CP American Literature  Contemporary Literature
<b>Honors English Language Arts</b>	8 <sup>th</sup> grade English Language Arts (Grade of 90% or higher)	Honors English Language Arts 9	Honors English Language Arts 10	Honors American Literature  Honors British Literature  AP English Language/Composition  AP English Literature Composition  *Literacy Standards 11	Honors American Literature  Honors British Literature  AP English Language/Composition  AP English Literature Composition

*Students are not required to stay in the same pathway throughout their four years at PHS.*

#### **English Language Arts Electives:**

English Composition I HACC

Introduction to Mass Communications

\*Literacy Standards (*By placement only*)

Speech and Debate

Film Studies

Journalism

Project Write

Sports Literature

## Math Curriculum Sequence

Pathway	8th	9th	10th	11th	12th
<b>Mathematics</b>	Pre-Algebra (74% or lower)	Algebra I A/B	Algebra II A/B	Geometry  Math Standards*	Accounting I**  Honors Accounting II**
<b>CP (College Preparation) Mathematics</b>	Pre-Algebra (75% or higher)	CP Algebra I A/B  Honors Algebra I	CP Algebra II A/B	CP Geometry  Math Standards*	CP Pre-Calculus  CP Finite Math  CP Statistics  AP Statistics  College Algebra HACC
	8 <sup>th</sup> grade Algebra 1 (69% or below)	CP Algebra I A/B			
	8 <sup>th</sup> grade Algebra 1 (70-79%)	CP Algebra IIA/B	CP Geometry	CP Pre-Calculus  CP Finite Math  CP Statistics  AP Statistics  College Algebra HACC  Math Standards*(11 <sup>th</sup> grade)	
		<b>9th</b>	<b>10th</b>	<b>11th and 12th</b>	
<b>Honors Mathematics</b>	8 <sup>th</sup> grade Algebra 1 (80% or higher)	Honors Algebra II	Honors Geometry	Honors Pre-Calculus  AP Statistics  AP Calculus  College Algebra HACC	

*Students are not required to stay in the same pathway throughout their four years at PHS.*

### **Math Electives:**

\*Math Standards (*By placement only*)

\*\*Accounting I and Honors Accounting II (may count as a math credit in Grade 12 only)

### **NOTES:**

- All A/B courses (Algebra IA and IB and Algebra IIA and IIB) must be taken in the same school year.
- If a student passes Algebra IA or IIA but fails Algebra IB or IIB, the student will need to re-enroll in the "A" portion of the course again the following year.
- All students must successfully complete full Algebra I, Algebra II, and Geometry courses.
- A student can accelerate his or her progress through the curriculum by taking more than one math class in a given year. Students should talk to their teacher and guidance counselor if interested.
- It is highly recommended that students moving from CP courses to Honors or AP courses, have previous Math grades of 90% or higher.

## Science Curriculum Sequence

Pathway	8th	9th	10th	11th	12th
<b>College Prep. Science</b>	8th grade Science (Grade below 90%)	CP Physical Science	CP Biology A/B	CP Chemistry  Science Elective  *Science Standards	Science Elective
<b>Honors Science</b>	8th grade Science (Grade of 90% or higher)	Honors Physical Science	Honors Biology	Honors Chemistry  Science Elective  *Science Standards	Science Elective

*Students are not required to stay in the same pathway throughout their four years at PHS.*

### **Science Electives:**

AP Biology

AP Physics

CP Anatomy/Physiology

CP Environmental Science

CP Physics

Environmental Science

Honors Physics

\*Science Standards (*By placement only*)

AP Chemistry

Chemistry 100 HACC

CP Earth Science

CP Forensic Science

Earth Science

Environmental Science HACC

STEMinar

### **NOTES:**

- A/B courses (CP Biology) must be taken in the same school year.
- Students who pass Biology A but not Biology B, only need to re-take Biology B the following year.
- All students must successfully complete full Biology courses.
- An elective of Lab Science is highly recommended for college-bound students.

## Social Studies Curriculum Sequence

Pathway	9th	10th	11th	12th
<b>Social Studies</b>	American Cultures	US Gov't. and Civics	World History: A Global Perspective	Social Studies Elective
<b>Honors Social Studies</b>	American Cultures	US Gov't. and Civics	World History: A Global Perspective	Social Studies Elective

*Students are not required to stay in the same pathway throughout their four years at PHS.*

### **Social Studies Electives:**

American Popular Culture  
 Archaeology/Forensic Anthropology  
 AP Microeconomics  
 Anthropology  
 Global Issues  
 US History – HACC  
 You and The Law

Ancient Civilizations  
 AP Macroeconomics  
 AP Psychology  
 Economics  
 Psychology/Sociology  
 World Religions

***\*These recommendations are meant to serve as a guide. All students are urged to consult with their teachers, counselor, and parents regarding their selections.***

# COURSE OFFERINGS

## AQUATICS/ HEALTH/ PHYSICAL EDUCATION

### 010010 Aquatics - Grades 9, 10, 11, 12

.5 credit

Students choosing Aquatics will be required to demonstrate proficiency in the following units: basic and/or advanced swimming strokes, water safety, skin diving, water polo, water fitness, and basic diving, as well as other game activities. Students with poor swimming ability should consider election of Aquatics in an effort to become "water safe." Students are required to provide their own suits and towels. Evaluation will be by a combination of unit skill tests, teacher observation, and student participation/on-task.

NOTE: This course will meet every other day and should be taken in combination with Health I or Health II in lieu of PE I or PE II.

### 010020 Lifeguarding/Aquatics - Grades 9, 10, 11, 12

1 credit

Students will be required to demonstrate proficiency in the following units: basic and/or advanced swimming strokes, water safety and basic rescue, skin diving, water polo, water fitness, and basic diving, as well as other game activities. Students are required to provide their own suits and towels. Evaluation will be by a combination of unit skill tests, teacher observation, and student participation/on-task. There will not be a written final, but students will have an in the water, practical final. Students will also be provided the opportunity to complete the Red Cross Lifeguarding Program. This portion of the course will provide entry-level lifeguard participants with the knowledge and skills to prevent, recognize and respond to emergencies. It will also teach how to provide care for injuries and sudden illness until emergency medical service (EMS) personnel arrive and take over. In order to become Red Cross certified, participants need to be at least 15 years of age by the end of the course and pass a swimming pre-test. If students wish to become Red Cross certified, the cost is about \$48.00, which includes a Lifeguarding book and pocket mask. To become certified, the participant needs to score an 80% or higher on all written tests and needs to perform at a proficient level on all the scenarios. The certificates will include Lifeguarding and First Aid and CPR for the Professional Rescuer. This class will count toward your required PE credit.

### 010030/010031 Physical Education IA/Health Education I - Grade 9 (required)

.5 credit/.5 credit

These courses must be taken together and will meet every other day for a semester. Instruction in the physical education segment will include health and skill related fitness concepts, various individual and team sports, and group activities. At this level, students will continue to develop mastery of skills in various sports as well as knowledge of rules and safety. Students will participate in drills, lead-up games and game situations. Required fitness tests will be administered. A daily change of clothing is required. Acceptable athletic attire for physical education class shall include: shirt, gym/athletic shorts, socks and sneakers. Topics for Health include self-responsibility for wellness, nutrition, substance abuse, and body systems. There is a cumulative final examination for Health.

### 010040/010041 Physical Education IB/Driver/Career Education - Grade 10 (required)

.5 credit/.5 credit

These courses must be taken together and will meet every other day for a semester. This is required for all students in grade 10. The Driver Education component of this class presents automobile operation, safe driving techniques, and highway traffic safety rules and regulations. It also assists the student in acquiring the driver's permit and other related forms. The Career Education component of this class is based on the Pennsylvania Academic Standards for Career Education and Work. It is designed to acquaint students with the developmental process of matching interests, abilities and aptitudes with a career cluster or pathway. Students will learn about career awareness, preparation, acquisition, retention, and advancement. They will demonstrate basic skills in order to perform a formal interview and prepare a career portfolio. Instruction in the physical education segment will include health and skill related fitness concepts, various individual and team sports, and group activities. At this level, students will continue to develop mastery of skills in various sports as well as knowledge of rules and safety. Students will participate in drills, lead-up games and

game situation. Required fitness tests will be administered. A daily change of clothing is required. Acceptable athletic attire for physical education class shall include: shirt, gym/athletic shorts, socks and sneakers.

### **010050/010051 Physical Education II/Health Education II** - Grades 11 or 12

.5 credit/.5 credit

These courses must be taken together and will meet every other day for a semester. Instruction the physical education segment will include concepts learned in Physical Education I with added emphasis on strategy and participation at a more advanced level. Required fitness tests will be administered. A daily change of clothing is required. Acceptable athletic attire for physical education class shall include: shirt, gym/athletic shorts, socks and sneakers. Topics for Health Education II include: health and your wellness, mental and emotional health, promoting safe and healthy relationships, substance abuse, disease prevention, and the reproductive system. There is a cumulative final examination for Health.

PRE-REQUISITE: Physical Education I/Health Education I

## **ART**

### **020090 Advanced Art** - Grades 10, 11, 12

1 credit

This course is designed for the advanced art student. A wide range of both two-dimensional and three-dimensional materials, processes, and conceptual approaches will be covered. Responsible studio behaviors will be expected as students work independently throughout the semester. Students must demonstrate fluency in visual language as they create original works of art. Class assignments will challenge students to set and achieve creative goals. Possible media may include: charcoal and pastels, marker and drawing ink, printmaking, ceramic, performance art, etc.

PREREQUISITE: A minimum of three art credits completed.

User Fee = \$20

### **AP Studio Art** - Grades 11, 12

#### **020011 Studio Art (A)**

#### **020012 Studio Art (B)**

1.5 credits (weighted)

This course is designed for the person interested in the possibility of pursuing a career in art. The primary objective of this course is to build a portfolio of student work that can be used for college admission and for advanced placement credit by taking the AP Art Exam through the College Board (Drawing or 2D Art and Design Exams only at this time). Students will create a body of work concentrating on the sustained investigation of a visual idea, an important aspect of the AP Portfolio. They will become familiar with the AP scoring guidelines and examples to use as inspiration and for idea generation. Class assignments will challenge students to set and achieve creative goals while focusing on in-depth, inquiry-based art and design making. Emphasis will be placed on developing a mastery of drawing skills and 2D design principles, understanding art-related career options, behaving like artists, and articulating information about their work. Students will have time to develop and document their portfolios according to their needs and will be working closely in an art community to analyze, evaluate, and grow in their work. Students must be motivated and self-disciplined to adequately fulfill the demanding requirements of the course.

PREREQUISITE: A minimum of three art credits completed User Fee = \$20

User Fee = \$20

### **020020 Art History** - Grades 9, 10, 11, 12

1 credit (Will only be offered on odd years)

Students will study the history, progression and development of art and artistic styles. Assorted cultures and their effect on artistic styles will also be examined. Class discussion, essay questions, and slide identification are essential to the class. Areas of evaluation could include, but are not limited to, worksheets, quizzes, tests and project work. Knowledge of world history and the behaviors of working artists is beneficial. Occasional nude artwork will be exhibited. A comprehensive final exam is given at the conclusion of the course and is worth 20% of the semester grade.

### **020030 Drawing and Painting I**- Grades 9, 10, 11, 12

1 credit

Drawing and Painting I will build upon the skills learned in Introduction to Art. Students will work with a breadth of drawing and painting materials, learning new and/or more advanced skills techniques, and conceptual approaches. Expect to practice the behavior of artists as you produce, view, and discuss art. There will be increased fluency in visual language. Possible media may include: charcoal, pen and ink, watercolor, acrylic paint, intaglio printmaking, and etc.

PREREQUISITE: Introduction to Art

User Fee = \$20

### **020040 Drawing and Painting II** - Grades 10, 11, 12

1 credit

Drawing and Painting II will build upon the skills learned during Drawing and Painting I. As this is an advanced level course, students will experience working with new and/or finer materials, learning new or more advanced skills and techniques to strive for depth of knowledge. Expect to practice the behavior of artists as you produce, view, and discuss art. Students will develop a high level of fluency in visual language. Possible media may include: charcoal, ink wash, oil pastel, marker, acrylic paint, oil paint, mixed media, and etc.

PREREQUISITE: Drawing and Painting I

User Fee = \$20

### **020050 Introduction to Art** - Grades 9, 10, 11, 12

1 credit

Introduction to Art is a foundational course required to progress further in Art at the High School level. Students will experience working with a wide breadth of media and learn new skills and techniques. Students will become engaged in the artistic process through researching, finding inspiration, and producing art. Students will gain exposure to art of the past and present and learn how to think critically about the visual arts. Possible media may include: pencil, pastel, watercolor, ceramic, acrylic paint, printmaking, collage etc.

User Fee = \$20

### **020070 Sculpture I and II** - Grades 10, 11, 12

1 credit

Emphasis will be placed on processes of creating three-dimensional art. Students will gain skills and experience with diverse media, including ceramic, found object, wire, and more. Expect to practice the behavior of artists as you produce, view, and discuss art. There will be increased fluency in visual language. Sculpture II will be an extension of the first level; however students taking this course a second time will pursue different experiences in diverse media.

This is your opportunity to expand upon what you did in level I!

PREREQUISITE: Introduction to Art

User Fee = \$20

### **020080 Two - Dimensional Design** - Grades 9, 10, 11, 12

1 credit

The purpose of this course is to challenge students to communicate through the visual arts in the mode of a designer. Students will become engaged in the artistic process through working for a specified audience and/or purpose, researching, and producing art. Students will gain exposure to and practice with many different kinds of media and processes, including a variety of ink types, scratchboard, sequential arts, hand-lettering, printmaking, and etc.

PREREQUISITE: Introduction to Art

User Fee = \$20

## **BUSINESS & COMPUTER EDUCATION**

### **030010 Accounting I**- Grades 10, 11, 12

1 credit

Accounting I gives the student an overall picture of a basic accounting system, as well as intensive drill and skill-

building in each phase of work of an accountant. Accounting I increases business vocabulary and develops an understanding of business organization and procedures. It serves as a sound foundation of further study in the field of accounting or as an excellent background for secretarial students, office workers and future business owners. First-year Accounting presents all phases of elementary accounting principles, payrolls and document forms commonly used in business transactions. Each type of business transaction is thoroughly studied through the use of written exercises similar to those met by a vocational accountant.

\* Sophomores and Juniors may apply credit earned in Accounting I to the general elective graduation requirement.

\* Seniors may apply credit earned in Accounting I to the math or general elective graduation requirement.

User Fee = \$20

### **AP Computer Science -A** - Grades 10, 11, 12

#### **030021 Computer Science - A (A)**

#### **030022 Computer Science - A (B)**

1.5 credits (Weighted)

This academic programming course will emphasize programming in Java following the Advanced Placement Computer Science A exam curriculum. Students will have extensive programming experience in the Java Language and will work with assigned applications of the language. Topics to be covered include computer terminology, functions, looping structures, data types, arrays, sorting, searching, files, and records. Evaluations will include worksheets, class work, projects, tests, and a final examination. This course would be especially valuable to students who plan to major in computer science, math, or science. This course provides the opportunity for students to receive college credit by taking the standardized AP test at the end of the course. Students are strongly encouraged to register for the A.P. Exam. Fees for the A.P. exam are to be paid by the student

PREREQUISITE: Honors Algebra II

\*Students choosing this course should NOT also select Honors Programming.

### **030030 Career and Financial Literacy** (This is a required course for all students in grade 11.)

1 credit

During the first half of this course, students will expand upon the 10<sup>th</sup> grade Career Education course and further explore their career choices by developing a career strategy, exploring workplace expectations, developing a plan for a school-to-work transition, and preparing for lifelong learning. Students will develop and present an Electronic Career Portfolio to showcase their achievements, growth, vision, reflection, skills, experience, training, and career goals. The second half of the course will focus on an increased understanding of financial literacy. During this part of the course, students will study earning and reporting income, managing finances and budgeting, saving and investing, buying goods and services, banking and financial institutions, and using credit.

\*This course is also offered online through the Cougar Academy. Details can be found in the Cougar Academy section of the course catalog on page 7. Completing one version of the course is required for all students in grade 11.

### **030040 Entrepreneurship**- Grades 10, 11, 12

1 credit

The Entrepreneurship and Small Business Management course gives students the opportunity to research and plan for ownership/management of a business. The units of study associated with this course include: examining entrepreneurship as a career, sources of new business enterprise ideas, analyzing markets and studying competitors, planning and organizing a business enterprise, marketing products/services, obtaining finances, cash flow charts, preparing a financial plan, and developing a business plan. This course is recommended for any student planning to major in business in a two- or four-year college/university or any student planning to own his or her own business in the future.

### **030050 Honors Accounting II**- Grades 10, 11,12

1 credit (weighted)

This course is a continuation of the first-year course, offering additional highly desirable general accounting procedures not covered in the first year course. Departmentalized accounting methods and systems for partnerships and corporations are included. Specific accounting principles and various methods of adjustments are presented involving "uncollectible accounts," and "depreciation of plant assets." Other accounting principles included are "accrued expenses," "accrued revenues" and the analysis and interpretation of financial statements.



PREREQUISITE: Accounting I.

\* Sophomores & Juniors may apply credit earned in Honors Accounting II to the general elective graduation requirement.

\* Seniors may apply credit earned in Honors Accounting II to the math or general elective graduation requirement.  
User Fee = \$20

### **030060 Honors Programming** - Grades 10, 11, 12

1 credit (Weighted)

This academic programming course will emphasize programming in Java, which is the basis of the Advanced Placement test in computer, although this is not a complete AP course. Students will have extensive programming experience in the Java Language and will work with assigned applications of the language. Topics to be covered include computer terminology, functions, looping structures, data types, arrays, sorting, searching, files, and records. Evaluations will include worksheets, class work, projects, tests, and a final examination. This course would be especially valuable to students who plan to major in computer science, math, or science.

PREREQUISITE: Algebra II

\*Students choosing this course can NOT also select AP Computer Science A.

### **030070 Internship Program (Work Based Learning)** - Grades 11, 12

1 credit

The Career Internship Program is intended to provide Palmyra High School juniors and seniors with the opportunity to participate in on-site observations of business and professional organizations. The program will provide students with the opportunity to interact with, observe, and assist individuals who are employed in a variety of professions. The intent of the internship is to provide activities that will enable the student to refine their career decisions based on significant knowledge and insights developed during participation.

### **030080 Microsoft Office Projects** - Grades 9, 10, 11, 12

1 Credit

Microsoft Office Projects is a course designed to build on and expand the skills developed prior to high school and to provide students with exposure to the advanced tools available in the core Microsoft Office Suite programs. Topics will include: tables, graphics, outlines, macros, mail merges, and interactive document content in Word; charts, formula development, and look up, statistical, financial and other advanced functions in Excel. Integration between the software packages will also be stressed via a simulation as the culminating activity.

### **030090 Multimedia Web Design** - Grades 9, 10, 11, 12

1 credit

Multimedia Web Design is a course to provide students opportunities to develop proficiency in using leading graphic design, photo editing, and web publishing and design software. Students will learn to prepare and edit various multimedia documents by practicing the basics of creativity, balance, design, and layout as well as using leading web page design software to develop webpages using HTML coding. Projects will be real world applications involving student choice and originality. (Students should not take this course if they have previously taken Web Technologies or Digital Media)

### **030100 Sports and Entertainment Marketing** - Grades 9, 10, 11, 12

1 credit

This is an introductory marketing course designed to incorporate business principles and procedures into the sports and entertainment industries. Students will learn to integrate the concepts of marketing, public relations, management, sales, distribution, and laws related to the sports and entertainment industries. Students will work individually and cooperatively to complete assignments and projects using the Internet and various computer technologies.

## **ENGLISH LANGUAGE ARTS**

### **AP English Literature and Composition** -Grades 11, 12

#### **040021 Eng Lit/Comp (A)**



## **040022 Eng Lit/Comp (B)**

1.5 credits (Weighted)

In an advanced reading and writing workshop setting, students will address topics and share ideas through a variety of challenging readings and writings. Students will build a writing portfolio which will include narrative, descriptive, expository and persuasive pieces. The course will use the study of sophisticated, college-level literature as a springboard to the development of these modes of writing. This course will require students to read and comprehend approximately 20 novels, as well as ancillary material, essays and poetry. The course provides the opportunity for students to receive college credit by taking the standardized A.P. Exam. Students are strongly encouraged to register for the A.P. Exam. Fees for the A.P. exam are to be paid by the student. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course. Students are recommended to have successfully completed Honors English Language Arts 10 or Honors American Literature prior to enrolling in this course.

## **AP English Language and Composition -Grades 11, 12**



### **040011 Eng Lang/Comp (A)**

### **040012 Eng Lang/Comp (B)**

1.5 credits (Weighted)

In an advanced writing workshop setting, students will address topics and share ideas through a variety of challenging reading and writing experiences. Students will build a writing portfolio, which includes narrative, descriptive, expository, and persuasive pieces. This course uses college level literature study as a springboard into these modes of writing. Ongoing assessment of this portfolio will constitute a large portion of a student's grade. This course provides the opportunity for students to receive college credit by taking the standardized A.P. Test at the end of the course. Students are strongly encouraged to register for the A.P. Exam. Fees for the examination are to be paid by the student. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course. Students are recommended to have successfully completed Honor English Language Arts 10 or Honors American Literature prior to enrolling in this course.

## **040030 Broadcast Journalism – Grades 9, 10, 11, 12**

1 credit

Broadcast Journalism is a fast-paced course focused on collecting newsworthy, school-related events to produce live and prerecorded video news segments for the student body. This is a project-based course that focuses on deadlines, news gathering, critical thinking skills, and ethical decision-making. Students will work with high-tech equipment inside and outside of the school. This course will be counted as a general elective.

PREREQUISITE: Introduction to Mass Communications

## **040280 Contemporary Literature - Grades 11,12**



1 credit

Contemporary Literature is a course designed to expose students to types of literature that reflect cultures from around the world, sheds light on historical events/movements, and creates connections between real world events and literature. In addition to reading novels and short stories, students will focus on literary concepts related to all reading levels and genres. Formal written assignments will be integrated into the curriculum focusing on basic writing skills.

## **040040 CP American Literature - Grade 11, 12**



1 credit

This course is designed to appeal to the average reader. It will include a chronological and historical study of American Literature. Formal written assignments will be integrated into the curriculum, building on vocabulary, and writing skills emphasized in College Prep English Language Arts 10.

## **040060 CP English Language Arts 9- Grade 9**



1 credit

This course provides in-depth academic level coverage of all areas useful in improving communication skills: grammar, vocabulary, writing, literature, speaking, reading, and listening. This broad spectrum is offered in a manner that gives the academic student a theoretical and practical foundation for future studies in English Language Arts.

**040070 CP English Language Arts 10** - Grade 10



1 credit

This course continues in-depth academic level coverage of all areas useful in improving communication skills: grammar, vocabulary, writing, literature, speaking, reading, and listening. Tenth grade College Prep. students will also be introduced to formal research. This broad spectrum is offered in a manner that gives the academic student a theoretical and practical foundation for future studies in English Language Arts.

**040270 English Composition I HACC** - Grades 11, 12



1 credit (Weighted)

Emphasizes the composition of organized, clear, coherent, and well-supported essays, which features standard English conventions, effective style, and the appropriate use of research strategies and sources. Students develop the critical reading and thinking skills necessary to produce effective college-level writing that communicates to a particular audience, fulfills a specified purpose, and conforms to a given genre. If registering for HACC credit a user fee consisting of all costs associated with college enrollment including registration, tuition, dues, fees and textbooks is required. This course may be subject to HACC enrollment requirements which could include submitting SAT scores and/or taking a placement test.

**040080 English Language Arts 11** - Grade 11

1 credit

This course fully reviews and expands upon basic writing skills, reading skills, and speaking skills, and then applies them to activities and projects and various work world applications. There will be a focus on cooperative learning, technology, and career preparation. Assessment will be in the form of compositions, tests and quizzes, participation, and presentations. This course will count as an English Language Arts credit.

**040090 Film Studies** – Grades 11, 12

1 credit

This ELA elective course will offer an encompassing view of film including film history, terminology, methods of analysis, social impact, theoretical issues, and aesthetics. Film Studies will afford students the opportunity to write about and present their knowledge of these views of film focusing on composition and public speaking.

**040100 Honors American Literature** - Grade 11, 12



1 credit (Weighted)

This course is designed to appeal to the high-level reader. It will include a historical study of American Literature. Formal literary analysis will be integrated into the curriculum, building on vocabulary and writing skills emphasized in Honors English Language Arts 10. Formal writing and speaking activities will also be included. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

**040110 Honors British Literature** - Grade 11, 12



1 credit (Weighted)

This course is suggested for highly motivated students who have met with success in previous honors level English Language Arts courses. Students will study the major periods in the history of British Literature focusing on a variety of authors and genres. In addition to the intense study of literature, students will also write a composition reviewing the elements of research, documentation, and the defense of a thesis in written form. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

**040120 Honors English Language Arts 9** - Grade 9



1 credit

In a highly rigorous setting, this course provides in-depth academic study of the writing process, literature, speaking, grammar and vocabulary. This broad spectrum is offered in a manner that gives the honors student a theoretical and practical foundation for future English Language Arts study. Students in this course must demonstrate high motivation for learning in the English Language Arts field. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

### **040130 Honors English Language Arts 10 -Grade 10**



1 credit (Weighted)

This course continues in-depth academic level coverage of all English Language Arts areas: writing, literature, speaking, vocabulary, and grammar. Tenth grade honors students will also be introduced to formal research. This broad spectrum is offered in an intensive manner that continues to offer the honors student a theoretical and practical foundation for high-level English Language Arts study. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

PREREQUISITE: CP English Language Arts 9 or Honors English Language Arts 9

### **040140 Introduction to Mass Communications** – Grades 9, 10, 11, 12

1 credit

Introduction to Mass Communications is the prerequisite course for the Cougar Media production courses: Journalism (Cougar Chronicle production), Broadcast Journalism (Cougar Media News), Yearbook (Palm Echo.) Students will learn about the role of journalism in our society, basic newswriting and publication processes, as well as layout, photography and beginning broadcasting skills. This course will be counted as an ELA elective.

### **040150 Journalism** – Grades 9, 10, 11, 12



1 credit

Students enrolled in this course will produce *The Cougar Chronicle*, PHS's student-run newspaper. The class setting will replicate that of a professional news publication. Students in the course will report on school events, assume leadership roles, and make editorial decisions about content and layout. In addition, students will learn marketing techniques, participate in ad sales, and practice team building.

This course will be counted as an ELA elective. It can be taken more than once, based on schedule availability.

PREREQUISITE: Introduction to Mass Communications

### **040160 Literacy Standards 9** - Grade 9 (*By placement only*)

1 credit

This course is required for students who have scored basic or below basic on district reading assessments and/or who have scored basic or below basic on the grade 8 PSSA reading assessment. The course is designed for students who have additional learning needs that require more intensive reading intervention. The student will be taught reading strategies to improve critical thinking, reading fluency, comprehension, and vocabulary knowledge. Resources include both fiction and non-fiction texts along with an independent reading component and writing component that focuses on literature responses. Students assigned to Literacy Standards 9 will also need to schedule an English Language Arts class. PLACEMENT CRITERIA: PSSA ELA Assessment; District ELA Assessments, Study Island Reading Assessment, GrAde Diagnostic Reading Assessment.

### **040170 Literacy Standards 10** - Grade 10 (*By placement only*)

1 credit

This course is required for students who have scored basic or below basic on district reading assessments and/or who have scored basic or below basic on the grade 8 PSSA reading assessment. The course is designed for students who have additional learning needs that require more intensive reading intervention. The student will be taught reading strategies to improve critical thinking, reading fluency, comprehension, and vocabulary knowledge. Resources include both fiction and non-fiction texts along with an independent reading component and writing component that focuses on literature responses. Students assigned to Literacy Standards will also need to schedule an English Language Arts class. PLACEMENT CRITERIA: GrAde Diagnostic Reading Assessment.

### **040180 Literacy Standards 11** - Grade 11 (*By placement only*)

1 credit

This course is required for students who have scored basic or below basic on district reading assessments and/or who have scored basic or below basic on the Keystone Exam. The course is designed for students who have additional learning needs that require more intensive reading intervention. The student will be taught reading strategies to improve critical thinking, reading fluency, comprehension, and vocabulary knowledge. Resources include both fiction and non-

fiction texts along with an independent reading component and writing component that focuses on literature responses. PLACEMENT CRITERIA: GrAde Diagnostic Reading Assessment, Keystone Literature Exam.

**040190 Project Write-** Grades 10, 11, 12



1 credit

This course will use a workshop approach to explore all modes of writing: expository, narrative and persuasive. There will be a focus on the fundamentals of the writing process with specific emphasis on revision. Students will develop a writing portfolio that will include a collection of creative and academic pieces. This course is suggested for students who want to expand their writing skills to meet college level standards.

**040200 Speech and Debate** - Grades 11, 12



1 credit

This course is designed for students who want the opportunity to specialize in public speaking and formal debate. Students should expect to learn the fundamentals of drafting and delivering formal speeches and less-formal discussions. They will study the history of debate and oration and learn how to organize, moderate, and participate in a formal debate. Students will also learn the rhetorical and stylistic strategies that apply to the spoken word and in writing. Assessment will be in the form of tests and quizzes, presentations, participation, and writing assignments.

**040220 Sports Literature** - Grades 10, 11, 12

1 credit

Sports Literature will offer an encompassing view of the way in which sports influences our society. This course will cover a variety of topics, themes, types of characters and philosophies. The aim of the course will be to analyze how sports and literature affect our lives outside the classroom. Elements such as perseverance, overcoming adversity, teamwork, goal-setting, reaching success and coaching will all be highlighted. This course will be heavily reading and writing based.

**040240 Yearbook** - Grades 9, 10, 11, 12

1 credit

Yearbook is a course offered to students who have successfully completed the Introduction to Mass Communications prerequisite course or have previously been enrolled in the Yearbook course and wish to repeat the course. Students enrolled in this course will produce the *Palm Echo* yearbook. Students will continue to write captions, headlines, and body copy according to journalistic standards. They will also take photographs and edit photos to be used in the yearbook. Students will utilize design layouts unique to yearbook production and use Jostens Yearbook Avenue software. This course will be counted as a general elective and may be repeated for an elective credit.

PREREQUISITE: Introduction to Mass Communications.

## **FAMILY AND CONSUMER SCIENCES**

**050010 Child Development**—Grades 9, 10, 11, 12

1 credit

This course explores child development from the prenatal period through school age; physically, emotionally, socially and intellectually. There will be a baby simulation experience using a computerized infant. The students will also be responsible for planning and implementing a week-long nursery school with local preschoolers. Study of childhood, safety and health issues, special challenges for children, and observing an elementary classroom will also be included.

User Fee = \$20

**050020 Clothing Construction**— Grades 10, 11, 12

1 credit , (Will only be offered on odd years)

This course builds on what students learned in Clothing, Fashion and Fabrics. This supervised sewing session allows the beginner to continue developing a broader set of sewing skills while working on more challenging projects under the hands-on guidance of the instructor. Students will construct a minimum of 4 projects that they select throughout the course. Students will furnish supplies for personal projects.

PREREQUISITE: Clothing, Fashion, and Fabrics

User Fee = \$20

**050030 Clothing, Fashion and Fabrics** – Grades 9, 10, 11, 12

1 credit

This course includes a study of fibers, fabrics and sewing techniques, both by hand and machine. It encompasses influences on clothing choices and customs, fashion history and the fashion industry. Students will learn care and maintenance of today's wardrobe as they create their own current fabric items. Students will furnish supplies for personal projects.

User Fee = \$20

**050040 Foods I** Grades 9, 10, 11, 12

1 credit

Students will gain basic knowledge of kitchen safety, tools and utensils, meal planning and consumerism. Students will have hands on experiences in a lab setting implementing basic food preparation techniques. This class will also delve into the world of fruits, vegetables, grains, and eggs. Students will learn many aspects of these important foods, as well as work with them using basic preparation techniques in the foods labs. Students will see that nutrition can be delicious and fun.

User Fee = \$20

**050050 Foods II** Grades 9, 10, 11, 12

1 credit

This class is for those curious about food and culture in other parts of the world. Students will build on their Foods 1 skills, while they learn about areas like Europe and Asia, discovering what makes each place unique as well as what they have in common. Labs will utilize traditional tools, ingredients, and dishes from distant and perhaps unfamiliar places.

PREREQUISITE: Foods 1

User Fee = \$20

**050060 Foods III** Grade 10, 11, 12

1 credit, (Will only be offered on even years)

We will utilize the skills and knowledge obtained in Foods 1 & Foods 2 to further explore celebratory aspects of food. This is a very hands-on class in which food becomes the medium for our creative focus. Students will learn various techniques for turning everyday food items into works of art. We will look at plating and garnishing as well as entertaining. Students should have access to a digital camera (available in library). Some project supplies are at the student's expense.

PREREQUISITE: Foods 2

User Fee = \$20

**050070 Housing and Interior Design** – Grades 9, 10, 11, 12

1 credit

This course includes a practical approach to understanding the use of design elements and principles to make living areas attractive, comfortable, and serviceable. A variety of projects afford the students the opportunity to express individual creativity. The students will learn to identify historical house designs; social, service and private areas of a home; and efficient traffic flow within the home. A study of maintenance and storage needs will also be addressed.

User Fee = \$20

**MATHEMATICS**

**060010 Algebra IA** - Grade 9

1 credit

Algebra IA is designed for those students who need a thorough course in Algebra I, but at a slower pace. Topics include: Real Numbers, Linear Equations, Functions and Linear Inequalities. Evaluation procedures will include testing, projects, and a final examination. Students completing this course must take the sequel, Algebra IB.

### **060011 Algebra IB** - Grade 9

1 credit

This course is the sequel to Algebra IA. Topics include: Systems of Equations and Inequalities, Exponents and Exponential Functions, Polynomials and Factoring, Quadratic Equations and Functions, Rational Expressions, and Probability and Data Analysis. Evaluation procedures will include testing, projects, and a final examination.

PREREQUISITE: Algebra IA

### **060020 Algebra IIA** - Grade 10

1 credit

Algebra IIA is designed for those students who need a thorough course in Algebra II, but at a slower pace. Topics include: Basic tools for Algebra I, Simplifying Radicals, Linear Equations and Functions, Systems of Linear Equations, Probability, Inequalities and Absolute Values and their Graphs, Introduction to Quadratic Factoring and Simplifying Polynomial Expressions. Evaluation procedures will include testing, projects, and a final examinations. Students completing this course must take the sequel, Algebra IIB. A graphing calculator from the Ti83/Ti84 series-is highly recommended for this course.

PREREQUISITE: Algebra 1B

### **060021 Algebra IIB** - Grade 10

1 credit

This course is the sequel to Algebra IIA. Topics include Quadratic Functions and Factoring, Polynomials and Polynomial Functions and their Graphs, Powers, Roots and Radicals, Exponential and Logarithmic Functions, and Data Analysis. Evaluation procedures will include testing, projects, and a final examinations. A graphing calculator from the Ti83/Ti84 series is highly recommended for this course.

PREREQUISITE: Algebra IIA.

### **AP Calculus - AB** - Grades 11, 12



#### **060031 AP Calculus AB (A)**

#### **060032 AP Calculus AB (B)**

1.5 credits (Weighted)

AP Calculus is designed for the highly motivated student considering a career in the science, medical business or mathematical fields and/or who experienced success in Pre-Calculus. Material covered in this class consists of information covered in a Level I college calculus class including derivatives and their applications, integration and applications as well as transcendental function, but done in a more enriching environment and at a slower pace. Strong Algebraic and problem solving skills are needed for the understanding of abstract concepts. This course provides the opportunity for students to receive college credit by taking the standardized AP test. Students are strongly encouraged to register for the AP exam. Fees for the examination are to be paid by the student. A graphing calculator from the Ti83/Ti84 series is required and utilized everyday with an emphasis on the theory as well as the application. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

PREREQUISITE: Honors Pre-Calculus or permission by instructor

NOTE: Students who select AP Calc AB cannot also select AP Calc BC. Students should select AB or BC after consulting with their School Counselor, Pre-Calculus teacher, and their potential choice of colleges. Calculus AB is not a prerequisite to Calculus BC.

### **AP Calculus - BC** - Grades 11, 12



#### **060041 AP Calculus - BC (A)**

#### **060042 AP Calculus - BC (B)**

1.5 credits (Weighted)

AP Calculus is designed for the highly motivated student considering a career in the science, medical business or mathematical fields and/or who experienced success in Pre-Calculus. Material covered in this class consists of information covered in a Level I college calculus class including: Rates of Change, Derivatives, Applications of Derivatives, Integration, Applications of Definite Integrals, Transcendental Functions, Polar Coordinates, Infinite Sequences and Infinite Series. Strong Algebraic and problem solving skills are needed for the understanding of abstract

concepts. This course provides the opportunity for students to receive college credit by taking the standardized AP test. Students are strongly encouraged to register for the AP exam. Fees for the examination are to be paid by the student. A graphing calculator from the Ti83/Ti84 series is required and utilized everyday with an emphasis on the theory as well as the application. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

PREREQUISITE: Honors Pre-Calculus or permission by instructor

NOTE: Students who select AP Calc BC can not also select AP Calc AB. Students should select BC or AB after consulting with their School Counselor, Pre-Calculus teacher, and their potential choice of colleges.

**AP Statistics** - Grades 10, 11, 12



**060051 AP Statistics (A)**

**060052 AP Statistics (B)**

1.5 credit (Weighted)

This course is designed for the highly motivated and competent math student who truly enjoys mathematics. The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: Exploring Data, Planning a Study, Anticipating Patterns, and Statistical Inference. Evaluation procedures will include testing, projects, and a final examination. This course provides the opportunity for students to receive college credit by taking the standardized AP Test. Students are strongly encouraged to register for the AP exam. Fees for the examination are to be paid by the student. A graphing calculator from the Ti83/Ti84 series is required for this course. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

PREREQUISITE: CP Algebra IIB or Honors Algebra II and CP Geometry or Honors Geometry

**060200 College Algebra HACC** - Grades 11, 12



1 credit (Weighted)

This course covers the fundamental algebraic operations, exponents and radicals, systems of equations, higher degree equations, logarithms, matrices, and inequalities. If registering for HACC credit a user fee consisting of all costs associated with college enrollment including registration, tuition, dues, fees and textbooks is required. This course may be subject to HACC enrollment requirements which could include submitting SAT scores and/or taking a placement test.

PREREQUISITE: CP Algebra IIB or Honors Algebra II and Honors Geometry or CP Geometry

**060070 CP Algebra IA** - Grade 9



(0.5 NCAA credit)

1 credit

This course will move at a faster pace and go more in depth than Algebra IA. Topics include: Real Numbers, Linear Equations, Functions and Linear Inequalities, Solving Equations and Inequalities, Solving Systems of Equations and Inequalities, Solving Applied Word Problems, and Graphing. Evaluation procedures will include testing, projects, and a final examination. Students completing this course must take the sequel, CP Algebra IB. A graphing calculator, from the Ti83/Ti84 series is highly recommended for this course.

PREREQUISITE: Pre-Algebra

**060071 CP Algebra IB** - Grade 9



(0.5 NCAA credit)

1 credit

This course is the sequel to CP Algebra IA. Topics include: Systems of Equations and Inequalities, Exponents and Exponential Functions, Polynomials and Factoring, Quadratic Equations and Functions, Rational Equations and Functions, and Probability and Data Analysis. Evaluation procedures will include testing, projects, and a final examination. A graphing calculator, from the Ti83/Ti84 series is highly recommended for this course.

PREREQUISITE: CP Algebra IA

**060080 CP Algebra IIA** – Grades 9 or 10



(0.5 NCAA credit)

1 credit

This course will move at a faster pace and go more in depth than Algebra 2A. This academic course is designed for those students with a good understanding of the basic concepts of Algebra I. Topics include: Equations & Inequalities,



Linear Equations and Functions, Linear systems and Matrices, Quadratic Functions and Factoring, and Polynomials and Polynomial Functions. This course is generally a college entrance requirement. Evaluation procedures will include testing, projects, and a final examination. A graphing calculator from the Ti83/Ti84 series is required for this course. Students completing this course must take the sequel, CP Algebra IIB.

PREREQUISITE: CP Algebra 1B

**060081 CP Algebra IIB** – Grades 9 or 10  (0.5 NCAA credit)

1 credit

This course is the sequel to CP Algebra 2A. This course will continue to develop concepts studied in CP Algebra IIA. Topics include: Rational Exponents and Radical Functions, Exponential and Logarithmic Functions, Rational Functions, Counting Methods and Probability, Data Analysis and Statistics, and Sequences and Series. This course is generally a college entrance requirement. Evaluation procedures will include testing, projects, and a final examination. A graphing calculator from the Ti83/Ti84 series is required for this course.

PREREQUISITE: CP Algebra IIA

**060090 CP Finite Math** - Grades 11, 12 

1 credit

This course is designed to prepare students for college level mathematics, to develop the ability to reason with quantitative information in order to prepare for a career, and to develop critical thinking and quantitative reasoning skills needed to understand major issues in life. Topics include Applications of Linear Equations, Matrices, Linear Programming, Finance, Sets and Counting Techniques, Introductory Probability and Statistics, and Logic. A graphing calculator from the Ti83/Ti84 series is required for this course.

PREREQUISITE: CP Algebra IIB or Honors Algebra II and Honors Geometry or CP Geometry

**060100 CP Geometry** - Grades 10 or 11 

1 credit

This academic course is the study of Euclidean Geometry, the study of geometric shapes through a deductive system built on definitions, postulates, and theorems. This course is designed to develop logical thinking through the study of proofs and problem solving. The content in this course will include Basic Fundamentals of Geometry, Measurement, Segment and Angle Relationships, Parallel and Perpendicular Lines, The Pythagorean Theorem, Triangle Relationships and Congruent Triangles, Similarity, Quadrilaterals, Polygons, Area, Perimeter, Surface Area and Volume and Circles. This course is generally a college entrance requirement. Evaluation procedures will include testing, projects, and a final examination.

PREREQUISITE: CP Algebra IIB

**060110 CP Pre-Calculus** - Grades 10, 11, 12 

1 credit

This course is designed for the student who experienced success in both CP Algebra II and CP Geometry. This course includes two major areas of study: Trigonometry and topics in Advanced Mathematics. In Trigonometry, the student will study the trigonometric functions and use them to prove identities, solve equations and applied triangle problems. Topics to be studied in Advanced Mathematics are linear functions and relations, theory of equations, matrices and vectors, sequences and series, and probability. This course will give the student an enriching environment to apply what they have learned in previous courses utilizing strong Algebraic and problem solving skills. Homework is vital to success. Evaluation procedures will include testing, projects, and final examinations. A graphing calculator from the Ti83/Ti84 series is required and utilized everyday with an emphasis on the theory as well as the applications for this course.

PREREQUISITE: CP Algebra IIB or Honors Algebra II and CP Geometry or Honors Geometry

**060120 CP Statistics** - Grades 11, 12 

1 credit

This course is designed to prepare students for college level Statistics. The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to Exploring Data, Planning a Study, and Probability. Evaluation procedures will include testing, projects,

and a final examination. A graphing calculator from the Ti83/Ti84 series is required and will be utilized every day with an emphasis on theory as well as application for this course.

PREREQUISITE: CP Algebra IIB or Honors Algebra II and Honors Geometry or CP Geometry

### **060130 Geometry** - Grade 11

1 credit

This course is essential for any student planning on a technical career; it is designed for those students who have successfully completed Algebra 2A and Algebra 2B. The content in this course will include Basic Fundamentals of Geometry, Measurement, Segment and Angle Relationships, Parallel and Perpendicular Lines, The Pythagorean Theorem, Triangle Relationships and Congruent Triangles, Similarity, Quadrilaterals, Polygons, Area, Perimeter, Surface Area and Volume and Circles. This course is not proof, but instead, application oriented. Evaluation will include testing, projects, and a final examination.

PREREQUISITE: Algebra IIB

### **060140 Honors Algebra I** - Grade 9



1 credit

This course will cover CP Algebra 1A/1B in one semester. Topics include: Real Numbers, Linear Equations, Functions and Linear Inequalities, Solving Equations and Inequalities, Solving System of Equations and Inequalities, Solving Applied Word Problems, Graphing, Exponents and Exponential Functions, Polynomials and Factoring, Quadratic Equations and Functions, Rational Equations and Functions, and Probability and Data Analysis. Evaluation procedures will include testing, projects, and a final examination. A graphing calculator, from the Ti83/Ti84 series is required for this course.

PREREQUISITE: Honors Algebra 1 is offered by placement as determined by a student's 8th grade PSSA Math Exam result, Pre-Algebra grade, and teacher recommendation.

### **060150 Honors Algebra II** – Grades 9 or 10



1 credit

This academic course is designed for the highly motivated and competent math student. The material covered in this course would be all the topics included in CP Algebra IIA/B, plus additional units on matrices and determinants. Evaluation procedures will include testing, projects, and a final examination. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course. A graphing calculator from the Ti83/Ti84 series is required for this course.

PREREQUISITE: 8<sup>th</sup> grade Alg. I or 9<sup>th</sup> grade CP Algebra 1A/B

### **060160 Honors Geometry** - Grades 9, 10, 11



1 credit (Weighted)

This academic course is designed for the highly motivated and competent math student. The student that experienced great success in Honors Algebra 2 and who truly enjoys mathematics would select this course. The materials covered in this course are all topics covered in College Prep. Geometry, but at an advanced level. Evaluation procedures will include testing, projects, and a final examination. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course. A graphing calculator from the Ti83/Ti84 series is encouraged, but not required, for this course.

PREREQUISITE: Honors Algebra II or CP Alg. IIB

### **060170 Honors Pre-Calculus** - Grades 10, 11, 12



1 credit (Weighted)

This course is designed for the highly motivated and competent math student that experienced a lot of success in Honors Algebra II and/or who truly enjoys mathematics. The material covered in this course are all the topics included in College Pre-Calculus, but done in a more enriching environment, with additional units on inverses of trigonometric and circular functions, mathematical applications of trigonometric and circular functions, descriptive statistics, and an introduction to Calculus. Homework and peer collaboration are vital to success. Evaluation procedures will include testing, projects, and final examinations. A graphing calculator is required and utilized everyday with an emphasis on theory as well as application for this course. All students who enroll in this class must complete a preliminary

assignment in order to be prepared for the start of this course. A graphing calculator from the Ti83/Ti84 series is required for this course.

PREREQUISITE: CP Algebra IIB or Honors Algebra II and CP Geometry or Honors Geometry

### **060180 Math Standards** – Grade 11 (*By placement only*)

1 credit

Math Standards is for those students who do not score proficient or advanced on the Algebra 1 Keystone Exam. This course will review standards covered on the Algebra 1 Keystone Exam. Students will retake the Keystone Exam toward the end of this course. Evaluation is based on quizzes, tests, projects, and a final exam. This course will count as a math credit.

PREREQUISITE: Math Standards is offered by placement as determined by a student's 10<sup>th</sup> grade Algebra 1 Keystone Exam result. Students who do not test proficient will be assigned to the standards class regardless of other math requests.

## **MUSIC**

Note: Participation in Band, Chorus and Orchestra requires a year-long commitment every first period. Students can, however, participate in any or all the music performing groups. Exceptions will be granted through the specific ensemble director.

### **070010 American Popular Music** - Grades 9, 10, 11, 12

1 credit

Popular Music will explore a variety of styles of American music, and how they have been impacted by world music trends. Additional studies will include the music industry, elements of music, and the influence of mass media and technology. Through the use of *Garageband*, elements of music, rhythm, melody, and harmony, as well as the relationship of music to other art forms (dance, architecture, visual arts, literature, and drama), will be explored. Students will develop critical listening skills while enhancing their enjoyment and understanding of various musical styles.

### **070020 Concert Band** - Grades 9, 10, 11, 12

2 credits, 1 credit or .66 credits

The band is an ensemble course that rehearses as both a concert and a parade marching ensemble. The band participates at select parades and stage concerts. Extra practices are scheduled as needed. Attendance is a requirement of the course for the duration of all functions including all concerts, and community events. From this group, individuals may audition for Jazz Ensemble, which is a select group, and rehearses independent of the regular band schedule. All members are required to perform playing tests for seating and assessment throughout the year. Previous band enrollment at the middle school or high school level is preferred.

User Fee = \$20

### **070030 Concert Choir** - Grades 9, 10, 11, 12

2 credits, 1 credit, or .66 credits

Using previous knowledge from the middle school choral setting, students in this non-auditioned ensemble will experience the skills necessary to become an active learner in the high school choral setting. Students will be formally assessed on their knowledge of the process of choral singing. This includes active participation, singing alone and with others, and the development of music theory and sight-singing techniques. This group provides performance opportunities outside of the school district that vary annually. If students are enrolled in the course, it is expected that they attend all performance as ample notice will be given. Previous chorus enrollment at the middle school or high school level is preferred\*.

User Fee = \$20

### **070040 Guitar Performance** - Grades 9, 10, 11, 12

1 credit

A course designed to help students develop their musical potential through the introductory study of guitar. Emphasis will be placed on posture, tone production, basic technique, reading standard music notation, tablature, and composition. No previous music experience is necessary; however daily practice is required.

### **070050 Guitar Theory and Design** – Grades 10, 11, 12

1 credit (This course is also listed in the Technology/Engineering section of the catalog.)

This co-taught course will be conducted in a music room and production laboratory setting. The course is designed to develop students' musical potential through an introductory study of guitar and guitar design. Each student will design and construct their very own guitar while learning musical theory behind playing a guitar. Emphasis in the musical portion of the class will be placed on posture, tone production, basic technique, reading music notation, and composition. The production portion of the course will focus on safety, CNC production, CADD, Electronics and various Science, Math, Engineering and Technology (STEM) concepts related to guitar building. Additional project supplies for this course will be at the individual student's expense. (Approx. \$125)

### **070060 Music Appreciation**- Grades 9, 10, 11, 12

1 credit

Students will investigate the development of western music and musical structure and how it relates to current music trends. Basic theory concepts of rhythm, melody, and harmony will be explored and applied through various mediums of music performance and hands on experiences with various musical instruments.

### **070090 Orchestra**- Grades 9, 10, 11, 12

2 credits, 1 credit, or .66 credits

Orchestra is a performance group that performs the String Exchange, Holiday Concert, and Spring Concert. Students in this class will gain a general knowledge and experience of how to be a successful musician. Students will be graded on participation, listening assignments, as well as playing tests on orchestral literature, scales, and rhythm exercises. Students may also audition to be in an honors ensemble that meets outside of school. Previous orchestra enrollment at the middle school or high school level is preferred.

User Fee = \$20

### **070100 Piano Performance** - Grades 9, 10, 11, 12

1 credit

A beginning piano course designed for students with little or no previous piano experience. Instruction will be delivered in group and individual settings with materials designed to meet the needs of various ability levels. Emphasis will be placed on posture and hand position, reading music, reading chord charts, solo playing, duets and group playing, basic music theory, and composition with computer notation programs. No previous music experience is necessary; however daily practice is required.

## **SCIENCE**

**AP Biology** - Grades 11, 12



**080011 AP Biology (A)**

**080012 AP Biology (B)**

1.5 credits (Weighted)

Advanced Biology is a rigorous college level course. This course differs from Honors Biology in the range and depth of topics, type of laboratory exercises performed, and type of textbook used. Topics of study will include chemistry of life, cells, cellular energetics, heredity, molecular genetics, and evolution stimulus and response, and ecology. This course provides the opportunity for students to receive college credit by taking the standardized AP. Students are strongly encouraged to register for the AP exam. Fees for the examination are to be paid by the student. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

PREREQUISITE: Honors Biology and Honors Chemistry

User Fee = \$20

**AP Chemistry** - Grades 11, 12



**080021 AP Chemistry (A)**

**080022 AP Chemistry (B)**

1.5 credits (Weighted)

Advanced Chemistry is a rigorous college level course. Students will complete an in-depth study of atomic theory, periodic table, spectroscopy, gases, bonding, reactions, stoichiometry, electrochemistry, equilibrium, and kinetics. A model-based approach to chemistry is stressed. Students will also complete numerous laboratory experiments, many of which will require formal laboratory reports. This course provides the opportunity for students to receive college credit by taking the standardized AP test. If students (1) perform well on the AP test, and (2) their chosen college accepts the test they can receive up to 8 college credits. Students are strongly encouraged to register for the AP exam. Fees for the examination are to be paid by the student. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course. AP chemistry covers more content and is taught at a higher collegiate level. Typically intended for students interested in science as a major in college.

PREREQUISITE: Honors Chemistry.

User Fee = \$20

**AP Physics I: Algebra-Based** - Grades 11, 12



**080031 AP Physics I: Algebra-Based (A)**

**080032 AP Physics I: Algebra-Based (B)**

1.5 credits (Weighted)

Advanced Physics is a rigorous college level course. This course provides a systematic introduction to the main principles of mechanical physics and emphasizes the development of conceptual understanding and problem-solving ability using algebra and trigonometry. The course is broken into 9 units: Kinematics, Dynamics, Uniform Circular Motion and Universal Gravitation, Conservation of Energy, Conservation of Energy, Rotational Kinematics and Dynamics, Waves and Simple Harmonic Motion, Electrostatics, Electrodynamics. This course also includes a laboratory component that involves challenge labs, confirmation labs, CERs, and standard scientific lab investigation. This course provides the opportunity for students to receive college credit by taking the standardized AP. Students are strongly encouraged to register for the AP exam. Fees for the examination are to be paid by the student. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

PREREQUISITE: Honors Chemistry, CP Physics and Honors Algebra II.

User Fee = \$20

**080040 Chemistry 100 HACC - Principles of Chemistry** - Grades 11, 12



1 credit (Weighted)

This course is for students who are looking to take a second level chemistry course and are interested in extending their chemistry knowledge. Laboratory work and conceptual understanding will be a main focus. We will spend time going into more detail on many of the topics covered in your first chemistry class as well as introducing new topics that you have not covered before. Application of chemistry into everyday life will also be a focus. By taking this course, students have the opportunity to earn 3 college credits through Harrisburg Area Community College. This course will include lab reports and application of knowledge, and a tuition fee may be required in order to attain college credit. HACC chemistry is a more general level 2 course and is better suited for students looking to gain general education college credits. HACC course description - For students desiring an introduction to chemistry or requiring a course to update their knowledge of chemistry. Fundamentals stressed are atomic structure, bonding, molecular structure, solutions, acids and bases, chemical nomenclature, and stoichiometry. If registering for HACC credit a user fee consisting of all costs associated with college enrollment including registration, tuition, dues, fees and textbooks is required. This course may be subject to HACC enrollment requirements which could include submitting SAT scores and/or taking a placement test.

PREREQUISITE: Algebra II and Chemistry

**080050 CP Anatomy and Physiology** - Grades 11, 12



1 credit

This course is designed for students who plan to attend a college or technical school in a field related to human health. It provides both a description of the structures within the different human body systems as well as the function of those structures. We will also explore how the structures work together to maintain homeostasis within humans, and what diseases or disorders can occur within the systems that can impair your health. Dissections of select organs will be used to complement the course materials. A culminating dissection of a fetal pig will also be performed to examine the relationships between all of the systems studied. Participation in all the course dissections are required. Course evaluations are primarily based on tests, quizzes, homework, laboratory activities, and projects.

PREREQUISITE: CP Biology and CP Chemistry

User Fee = \$20

**080060 CP Biology A** - Grade 10  (0.5 NCAA credit)

1 credit

This course is designed to provide college-bound students with a background in biology. This academic course will cover biochemistry, cellular structure and energy, cellular membrane and transport, and cellular division. In addition to theoretical work, laboratory experiences will be provided. Students completing this course must take the sequel, College Prep Biology B.

PREREQUISITE: CP Physical Science

**080061 CP Biology B** - Grade 10  (0.5 NCAA credit)

1 credit

This course is the sequel to Biology A. This course is designed to provide college-bound students with a background in biology. This academic course will cover, nucleic acids and protein synthesis, genetics, biotechnology, evolution, ecological structure and relationships. In addition to theoretical work, laboratory experiences will be provided. Students will take the PA Biology Keystone Exam at the completion of this course.

PREREQUISITE: CP Biology A

**080070 CP Chemistry** - Grades 10, 11, 12 

1 credit

This course is designed to provide college-bound students with a background in chemistry. It provides both descriptive and mathematical approaches to the study of chemistry. Students will be introduced to the vocabulary and mathematics of symbols, measurement, matter, solutions, periodic table, chemical bonding, the mole concept, reactions, stoichiometry, atomic theory, and gas laws.

PREREQUISITE: CP Biology A&B

**080080 CP Earth Science** - Grades 10, 11, 12 

1 credit

This course will involve students in a detailed examination of geology, oceanography, meteorology, and paleontology. As an elective, students taking this course should have an interest in the earth and its resources. Among the topics covered in this course are rock and mineral classification, volcanoes and earthquakes, plate tectonics. Evaluations will be based on homework, tests and quizzes, oral and written reports, laboratory activities and write-ups, and worksheet exercises. This course is intended to prepare students for post-high school studies in the natural sciences. Students should have completed Chemistry or be taking it concurrently with this course.

PREREQUISITE: CP Science classes.

**080090 CP Environmental Science** - Grades 10, 11, 12 

1 credit

This interdisciplinary course blends traditional academic theory with several real world application field experiences. Students will measure a variety of parameters in terrestrial and aquatic systems including woodlands, grasslands, lakes, ponds and streams. Activities will include water quality assessments of streams, lakes and ponds; and soil analysis. The goal is to provide students with a background in the scientific principles and concepts in the classroom that are then examined with field experiences. Students will gain a better understanding of their environment and its complexities. In addition to the traditional class work and field experiences, students will participate in a variety of laboratory activities and projects.

PREREQUISITE: CP Chemistry, CP Biology

**080100 CP Forensic Science** - Grade 11, 12



1 credit

Forensic Science is the application of scientific knowledge and methodology to criminal investigations and legal proceedings. It is designed for students who plan to attend a college, technical school, or military training in a field of forensic science or law enforcement. Students will learn how to observe, collect, analyze and evaluate evidence found at crime scenes. Some of the many topics covered are crime scene analysis, fingerprint analysis, hair and fiber comparison, body fluid and DNA analysis, and ballistics. The class is designed around authentic performance assessments with students working in teams to solve crimes using scientific knowledge and reasoning. Other course evaluations include: tests, quizzes, homework, and projects. It involves all areas of science including biology, anatomy, chemistry, physics, and earth science with an emphasis in lab skills, complex reasoning and critical thinking. In addition, students must incorporate the use of technology, and communication skills.

PREREQUISITE: CP Biology and CP Chemistry

User Fee = \$20

**080110 CP Physical Science** - Grade 9



1 credit

This academic course is designed for students who plan to attend college or technical school. It provides both descriptive and mathematical approaches to the study of physics and chemistry with an emphasis on application of knowledge. Among the topics covered in the course are: scientific methods, energy, phase changes, classification of matter, water, acid & bases, the atom, the periodic table, chemical nomenclature, chemical reactions, motion, and forces. The course evaluations are primarily based on tests, quizzes, homework, laboratory activities, and projects.

**080120 CP Physics** - Grades 10, 11, 12



1 credit

This course is recommended to any student planning to attend college. In this course, students will gain a background in motion, forces, circular motion, gravitation, energy, momentum, wave behavior, and electricity. A major emphasis of the course is to help students improve their problem-solving skills. Laboratory activities are designed to develop skills in obtaining, analyzing, and interpreting data. Evaluations in the course are made on the basis of tests, quizzes, homework, and laboratory activities.

PREREQUISITE: CP Chemistry and CP Algebra II.

**080130 Earth Science** - Grades 10, 11, 12

1 credit (Will only be offered on even years)

This course will involve students in a general discussion of geology, oceanography and meteorology. As an elective, students taking this course should have an interest in the earth and our environment. Among the topics covered in this course are rocks and minerals, volcanoes and earthquakes, plate tectonics. Evaluations will be based on homework, tests and quizzes, oral and written reports, laboratory activities and write-ups, and worksheet exercises.

**080140 Environmental Science** - Grades 10, 11, 12

1 credit (Will only be offered on odd years)

This course is designed for students who want to learn about the cause and effect relationship between humans and the environment. When applicable, this interdisciplinary course blends traditional theory with real world field experiences. Activities will include water quality assessments of streams, lakes and ponds and soil analysis. The goal is to provide students with a background in the scientific principles and concepts in the classroom that are then examined with field experiences. Students will gain a better understanding of their environment and its complexities. In addition to the traditional class work and field experiences, students will participate in a variety of laboratory activities and projects.

**080150 Environmental Science HACC** - Grades 11, 12



HACC – BIO - 103

1 credit (Weighted)

Environmental Science is the study of nature's interactions and the role human kind plays with that system. In this

class we will explore the history of the environmental movement, how natural systems work, how humans have affected those natural systems and how those natural systems control the course of human endeavor. The class will include lecture, lab activities, research projects, activities geared toward the increased understanding of the biosphere and discussion of today's most relevant topics in the environmental field. Students who have taken this class will have an increased understanding and appreciation of nature and the interconnectedness of all living things on earth. "We do not own the Earth; we borrow it from our children." If registering for HACC credit a user fee consisting of all costs associated with college enrollment including registration, tuition, dues, fees and textbooks is required. This course may be subject to HACC enrollment requirements which could include submitting SAT scores and/or taking a placement test.

PREREQUISITE: CP Biology, CP Chemistry

### **080160 Honors Biology** - Grade 9, 10

1 credit (Weighted)

This demanding course is designed for motivated students who plan to attend college for science-related studies. It is designed to provide a background in biology for the students who want to be challenged and can handle the accelerated pace of learning, since the curriculum will be completed within one semester instead of a full year. It will cover biochemistry, cellular structure and energy, cellular membrane and transport, cellular division, nucleic acids and protein synthesis, genetics, biotechnology, evolution, ecological structure, and ecological relationships. In addition to theoretical work, laboratory experiences will be provided. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course. Students will take the PA Biology Keystone Exam at the completion of this course.

PREREQUISITE: Honors Physical Science

### **080170 Honors Chemistry** - Grades 10, 11, 12

1 credit (Weighted)

This academic course is designed to provide motivated students with a background in chemistry. As with CP Chemistry, it provides both descriptive and mathematical approaches to the study of chemistry, but the pace will be faster, more material will be covered, and it will be covered in greater depth. There will be more opportunities for enrichment and application. Students will work with measurement, matter, solutions, periodic table, chemical bonding, the mole concept, reactions, stoichiometry, atomic theory, and gas laws. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

PREREQUISITE: Honors Biology

### **080180 Honors Physical Science** - Grade 9

1 credit

This demanding course is designed for motivated students who plan to attend college for science-related studies. It is designed for the student who wants to be challenged. As with CP Physical Science, it provides both descriptive and mathematical approaches to the study of physics and chemistry with an emphasis on application of knowledge. The pace will be faster, more material will be covered, and it will be covered in greater detail than in the CP course. There will also be more opportunities for enrichment. The course evaluations are primarily based on tests, quizzes, homework, laboratory activities, and projects. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

### **080190 Honors Physics** - Grades 10, 11, 12

1 credit (Weighted)

This course is designed to provide motivated students with a background in physics and is recommended to any student planning to attend college. This course includes both conceptual and mathematical approaches to the study of the nature of the physical universe. Topics include Kinematics, Dynamics, Circular Motion, Gravitation, Energy, Momentum, Waves, and Electrostatics. The pace will be faster than the CP Physics course, students will be required to solve more complex problems, and topics/concepts will go into greater depth. Laboratory activities are designed to develop skills in obtaining, analyzing, and interpreting data. Evaluations in the course are made on the basis of tests, quizzes, homework, and laboratory activities. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

PREREQUISITE: Honors Chemistry and Honors Pre-Calculus.



### **080200 Science Standards** - Grade 11, 12 (*By placement only*)

1 credit

Science Standards is for students who do not score proficient or advanced on the Biology Keystone Exam. This course will review all standards covered on the Biology Keystone Exam. Evaluation is based on quizzes, tests, and projects. This course will count as a science credit.

PREREQUISITE: Science Standards is offered by placement as determined by a student's Biology Keystone Exam result. Students who do not test proficient will be assigned to the standards class regardless of other science requests.

### **110080 STEMinar** - Grade 11, 12

1 credit

(This course is also listed in the Technology/Engineering section of the catalog.)

This capstone course will provide students with the opportunity to integrate concepts and subject matter from Science, Technology, Engineering, and Math (STEM). Students will be required to *apply* science and math knowledge and basic concepts for design, problem solving, technical writing, computer application, and material processing skills. The culmination of this course will be to develop and construct a design solution to a problem or an integral part of a system. All solutions will be tested, evaluated and redesigned as needed as time permits. Emphasis will be placed on science and math concepts as well as the engineering design process including research, documentation and evaluation of the solution to the design problem. The organizational structure of this course is based on a half-credit science and a half-credit technology. Work will be "Student Driven" and focused on a "Central Project." This philosophy will provide a realistic and meaningful experience for students and to allow for guidance and support throughout the course.

PREREQUISITE: CP Physical Science and CP Biology (CP Chemistry or CP Physics concurrently highly recommended)

User Fee = \$20

## **SOCIAL STUDIES**

### **090010 American Cultures** - Grade 9



1 credit

This course deals with the leading aspects of American history from the early 20<sup>th</sup> Century to present day America. Attention is given to political issues, institutions, political parties, leadership, and diplomatic and constitutional questions; as well as economic, social, and intellectual trends. Major events and eras such as the Gilded Age, WWI, The Great Depression, WWII, Korean War, Vietnam War, The Civil Rights Movement, and the turn of the Millennium will be studied. This course also focuses on what is unique in the American historical experience and relates American history to the broader global context.

### **090020 American Popular Culture** -Grades 9, 10, 11, 12



1 credit

This course is intended to examine and critically analyze the development and influence of American Popular Culture and how it has created the modern, interconnected world. There are three major objectives for the class. First, students will understand how major historical events influenced cultural development in America. Second, students will gain an understanding of how cultural developments in areas such as film, music, sports, media, etc, influenced American life in the 20<sup>th</sup> and 21<sup>st</sup> century. And, thirdly, students will learn how to assess and analyze current issues in the arts, entertainment and technology to consider competing perspectives on the future of American history and society, and an understanding of how the world views America through our culture.

### **090030 Ancient Civilizations** - Grades 9, 10, 11, 12



1 credit

In this course, students will study the emergence of the major civilizations of the ancient world, beginning with the early river valley civilizations of Mesopotamia, Egypt, the Indus Valley and Yangtze-Huang He and finishing with the end with the dawn of the era of exploration, colonization and exploitation. Students will pay special attention to how societies evolved across this expanse of time—from fragmented and primitive agrarian communities to more advanced and consolidated civilizations. By the end of the course, students will possess a thorough understanding of important overarching social, political, religious, and economic themes in the ancient world. Students will analyze the

interactions among the various cultures, emphasizing their enduring contributions and the link, despite time, between the contemporary and ancient worlds.

**090040 Anthropology** - Grades 10, 11, 12



1 credit

Physical Anthropology is the study of man in all times and places. Physical Anthropology focuses on the development of man from the earliest hominids up through modern man. It also focuses on the spread and settlement of humans and the subsequent development of human culture and civilizations. Cultural Anthropology is the study of living peoples, their beliefs, practices, values, ideas, technologies, economies and more. It's the study of how people adapt to their various geographic environments in order to live and how they develop their culture.

**AP Macroeconomics** - Grades 11, 12



**090171 AP Macroeconomics (A)**

**090172 AP Macroeconomics (B)**

1.5 Credits (Weighted)

AP Macroeconomics focuses on the principles that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price-level determination; it also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts. This course will include a summer packet and summer readings. The course provides the opportunity for students to receive college credit by taking the standardized A.P. Exam. Students are strongly encouraged to register for the A.P. Exam. Fees for the A.P. exam are to be paid by the student. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

**AP Microeconomics** - Grades 10, 11, 12



**090051 AP Microeconomics (A)**

**090052 AP Microeconomics (B)**

1.5 Credits (Weighted)

The purpose for the AP Microeconomics course is to give students a thorough understanding of the principles of economics as they apply to the functions of individual decision makers (consumers and producers) within the economic system. The course will place emphasis on the nature and functions of product markets and includes the study of factor markets and the role of government in promoting greater efficiency and equity in the economy. The course provides the opportunity for students to receive college credit by taking the standardized A.P. Exam. Students are strongly encouraged to register for the A.P. Exam. Fees for the A.P. exam are to be paid by the student. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

**AP Psychology** - Grades 10, 11, 12



**090061 AP Psychology (A)**

**090062 AP Psychology (B)**

1.5 credits (Weighted)

Advanced Placement Psychology is designed as a rigorous curriculum that provides an overview of current psychological theory and practice. Students will explore the systematic and scientific study of the behavior and mental processes of humans and other animals. Students will be exposed to the principles, concepts and phenomena associated with major subfields within psychology, including biological bases of behavior, cognitive and emotional processes, and diagnosis and treatment of psychological disorders. In accordance with the driving principles of current psychological practice, this course will emphasize scientific method and procedure, ethical standards in research, and critical thinking skills. Student academic performance is expected to meet or exceed the challenging requirements of an introductory-level college survey course. Student work will be required outside of class time. The course provides the opportunity for students to receive college credit by taking the A.P. Psychology Exam. Students are strongly encouraged to register for the A.P. Exam. Fees for the A.P. exam are to be paid by the student. All students who enroll in this class must complete a preliminary assignment in order to be prepared for the start of this course.

**090070 Archaeology/Forensic Anthropology** - Grades 9,10,11, 12



1 credit

This course focuses on Archaeology and Forensic Anthropology. Archaeology is the study of human history before recorded time and/or the study and re-evaluation of recorded human history. Students will learn about the theories and methods of Archaeology and the basics of how to conduct and interpret an archaeological dig. Forensic Anthropology is the examination of skeletal remains. This examination can be used to first determine if the remains are in fact human. Then the forensic anthropologist can determine the gender, approximate age, physical stature, and likely racial affiliation of the person in life.

**090080 Economics** - Grades 10, 11, 12



1 credit

Economics explore both microeconomics and macroeconomics. This course will address the three fundamental economic questions, the practice of making economic choices, comparison of the differing economic systems, and the connections between economics and government and current events. Students will explore basic economic concepts including but not limited to scarcity, free enterprise, supply and demand, market structures, business organizations, revenue, expenditures, and the global economy. Students will practice writing and research and will engage in analysis of varied political and social topics.

**090090 Global Issues** - Grades 9, 10, 11, 12



1 credit

Global Issues will focus on international problems confronting today's world and challenges that both unite and divide the various geo-cultural regions. Focus is on the study of multifaceted connections among nation states, nongovernmental organizations, diverse ethnic, cultural and religious groups, and populations around the world, through the analysis of current events and issues to understand how those matters are influenced by geography, history, culture, religion, governing systems, economics, resource management and human rights. Students will develop critical thinking skills and perspectives to better understand the many complexities in today's world and will collaborate to develop possible solutions strategies to those problems now and in the future.

**090100 Psychology/Sociology**- Grades 10,11, 12



1 credit

The psychology portion of this course will introduce students to the scientific study of the behavior and mental processes of human beings and other animals. Psychology focuses on the individual. The major principles of psychology will include many of the following: brain and biology, sensation and perception, learning and conditioning, human development, motivation and emotion, thinking, memory, intelligence, personality, stress, social psychology, and abnormal psychology. The Sociology portion of this course is an introduction to sociology as a way of understanding the world. This course will focus on several important sociological topics, including socialization, culture, inequality, and political sociology. Students will leave this course with an understanding of the three main sociological perspectives, an understanding of several important sociological theories, the ability to apply these perspectives and theories to contemporary social problems, and insight into how you shape society and how society shapes you. Psychology & Sociology will be taught in accordance with the relevant Pennsylvania Academic Standards for Social Studies. Educational Technology will be integrated into this curriculum.

**090110 U.S. Government and Civics** - Grade 10



1 credit

U.S. Government and Civics is an academic course in the study of the origins and nature of government with special emphasis on the theoretical and practical aspects of citizenship, its rights and duties; the duties of citizens to each other and to the government. It includes the study of civil law and civil code, and the study of government with attention to the role of citizens in the operation and oversight of government. Topics will include the Constitution, the court system, individual rights, connections between government and economic systems and current events. Students will practice writing and research and will engage in analysis of varied political and social topics.

**United States History - HACC** - Grade 11, 12



**090120 United States History (A) (semester 1)**

**090130 United States History (B) (semester 2)**

2.0 credits (Weighted)

United States History (HACC) is a challenging college-level course, which is designed to provide students with the skills and factual knowledge necessary to critically analyze the problems and issues in United States History. Through this course, students will learn practical and declarative knowledge of U.S. History, as well as critical thinking skills. Themes and concepts such as social and economic development, foreign policy and American identity will be used to highlight important information and to connect students to broader historical narratives. By taking both of these courses, students have the opportunity to earn 6 college credits through Harrisburg Area Community College. This course will include a summer packet and summer readings, and a tuition fee may be required in order to attain college credit. In addition to college credit, students will have the option to take the AP Exam in May. If registering for HACC credit a user fee consisting of all costs associated with college enrollment including registration, tuition, dues, fees and textbooks is required. This course may be subject to HACC enrollment requirements which could include submitting SAT scores and/or taking a placement test.

**090140 World History: A Global Perspective** - Grade 11



1 credit

World history seeks a global perspective on the past, one that acknowledges and integrates the historical experiences of all of the world's people. Only by examining humanity's shared past is it possible to view today's world in meaningful historical context. This course focuses on global historical patterns looking for significant connections across both time and geographical space to employ a thematic approach to understanding today's world. Students will explore how the processes of world history have drawn peoples of the world together and how the patterns of world history also reveal the diversity of the human experience. Students will use a variety of print and non-print sources to analyze current real-world problem, environmental and societal issues with appropriate historical narrative. Students will develop critical thinking skills and perspectives to better understand the many complexities in today's world.

**090150 World Religions** – Grades 10, 11, 12



1 credit

The course is a survey of the major religious traditions of the world. Emphasis is placed upon the theologies, religious practices and ethical teachings of the faiths studied. The course will begin with an inquiry into the nature of religion and religious belief, and then survey ancient mythologies and religions, primarily those of Egypt, Mesopotamia, and Greece and Scandinavia. The course will then turn to study of the Abrahamic Religions the major Eastern (Hinduism, Buddhism, Shintoism, Taoism and Confucianism). The influence of religion and religious events upon civilizations and events, both past and present, will be emphasized throughout the course.

**090160 You and the Law** – Grades 11, 12



1 credit

This course is the study of Constitutional, Criminal, and Civil Law. Special emphasis will be placed on real-life, practical applications and scenarios and the impact that law has on students' lives. Areas of study include lawmaking, the court system, crime and criminal law, juvenile justice, torts, consumer law, family law, and individual rights and liberties. Students will work to improve skills and attitudes that will not only benefit those planning to attend a college/university following high school, as well as those wishing to become a more well-informed and prepared member of society.

**SPECIAL EDUCATION**

**Academic Support** - Grades 9, 10, 11, 12

**100120 Academic Support (semester 1)**

**100121 Academic Support (semester 2)**

2 credits

The purpose of this semester-long course is to support the regular education classroom instruction through the development of skills necessary for school success, such as organizational strategies and study skills. Students have the opportunity to practice applying the skills while working on regular education class assignments, projects, and tests. The course also helps prepare students for post-secondary transition through activities and speakers.

*Enrollment Information:* To enroll in this course, students must have an IEP. Placement into the course is at the

discretion of the special education staff.

**Affective Skills** - Grades 9, 10, 11, 12

**100110 Affective Skills I (semester 1)**

**100111 Affective Skills II (semester 2)**

2 credits

These courses are designed to help students be successful at school and home, and in the workplace, and community. Students will work on improving themselves and their relationships with others. They will focus on developing skills such as self-advocacy, dealing with difficult situations, time management, organization skills, and interpersonal relationships. Students will be required to participate in group discussions and complete projects.

*Enrollment Information:* To enroll in this course, students must have an IEP. Placement into the course is at the discretion of the special education staff.

**Intensive Language Arts Support** - Grades 9, 10, 11, 12

**100010 Intensive Language Arts Support I (semester 1)**

**100020 Intensive Language Arts Support II (semester 2)**

2 credits

These courses are designed for students who require extensive instruction and practice in the areas of reading and writing using materials that are aligned with the students' current instructional levels and taught in a small group setting. Instruction is provided in the areas of reading decoding, reading comprehension, reading fluency, encoding, and written expression.

*Enrollment Information:* To enroll in this course, students must have an IEP. Placement into the course is at the discretion of the special education staff.

**Intensive Math Support** - Grades 9, 10, 11, 12

**100040 Intensive Math Support I (semester 1)**

**100041 Intensive Math Support II (semester 2)**

2 credits

These courses focus on the foundational skills for algebra by providing a comprehensive program for students who need a more hand-on approach to learning through the use of manipulatives to develop conceptual understanding. The class provides the necessary structure to model and solve problems, and links numerical and graphical representations to problem solving.

*Enrollment Information:* To enroll in this course, students must have an IEP. Placement into the course is at the discretion of the special education staff.

**Language Arts Support** - Grades 9, 10, 11, 12

**100070 Language Arts Support I (semester 1)**

**100071 Language Arts Support II (semester 2)**

2 credits

These courses focus on the fundamentals skills of reading and writing using materials that are aligned with the students' current instructional levels and taught in a small group setting. Reading and writing strategies are emphasized to teach skills in the areas of reading decoding, reading comprehension, reading fluency, encoding, and written expression

*Enrollment Information:* To enroll in this course, students must have an IEP. Placement into the course is at the discretion of the special education staff.

**Math Support** - Grades 9, 10, 11, 12

**100090 Math Support I (semester 1)**

**100091 Math Support II (semester 2)**

2 credits

These courses focus on skills necessary for future success in Algebra and is for students who need additional instruction and practice provided in a small group setting. The course is aligned to the district's pre-algebra curriculum and includes scaffolded lessons to help prepare students for complex math tasks.

*Enrollment Information:* To enroll in this course, students must have an IEP. Placement into the course is at the discretion of the special education staff.

## **TECHNOLOGY & ENGINEERING EDUCATION**

### **110010 Computer Aided Drafting and Design** - Grades 9, 10, 11, 12

1 credit

This course further develops the students' understanding of drafting and design. Students will be involved in both mechanical and computer aided drafting, with the major emphasis on CADD. Activities will focus on problem-solving and the design process. Drafting based projects will include multi-view drawings, isometric drawings, and 3-D modeling. Architectural design will also be explored in this course through the design of floor plans and elevations. The software packages that will be utilized in this course will be Solidworks, AutoCad, Adobe Illustrator. Students will receive 0.5 credit toward the computer technology graduation requirement upon the completion of this course.

PREREQUISITE: Foundations of Technology & Engineering

User fee = \$20

### **110020 Digital Photography** - Grades 9, 10, 11, 12

1 credit

Photography is a course that will center on the camera and the science of capturing light. Learning its functions will be an important starting point. Focus will be placed on how to create a good photo by understanding composition, capture and processing techniques. As the course progresses, students will learn advanced techniques used to capture photos and process them. A segment of the course will be devoted to cell phone photography Apps and how to make the most of them. Photoshop, Microsoft Publisher and other software will be used throughout this course. Students must have access to a digital camera that has a resolution of 4 megapixels or better and has a removable memory card. Students will receive 0.5 credit toward the computer technology graduation requirement upon the completion of this course.

PREREQUISITE: Foundations of Technology & Engineering

User fee = \$20

### **110030 Engineering** - Grades 9, 10, 11, 12

1 Credit

In this course students will discover the meaning of engineering. This understanding will be developed through various engineering activities and design challenges. Students will have the opportunity to solve engineering problems that are based on mechanical, electrical, civil, and chemical topics. The software packages that will be utilized in this course will be Solidworks,-AutoCad, Adobe Illustrator. Students will also be introduced to drafting and Computer-Aided Design during this course. Students will receive 0.5 credit toward the computer technology graduation requirement upon the completion of this course.

PREREQUISITE: Foundations of Technology & Engineering

User fee = \$20

### **110040 Engineering Design Through Metallic Materials** - Grades 9, 10, 11, 12

1 credit

This class further refines students' skills in safety, manipulation of metals, and the engineering design process. Students will be challenged to design a unique metal-based product, create a full-scale mock-up of their design, produce their product, and evaluate the final work. Areas of study will include welding, machining, fastening, casting, and finishing of metals and metal products. Students will also engage in a mass manufacturing activity of metal project selected by the class.

PREREQUISITE: Foundations of Technology & Engineering

User fee = \$20

### **110050 Engineering Design Through Wood Materials** - Grades 9, 10, 11, 12

1 credit

This class further refines students' skills in safety, manipulation of wood, and the engineering design process. Students will be challenged to design a unique wood based product, create a full-scale mock-up of their design, produce their

product and evaluate the final work. Areas of study will include the engineering design process, wood species identification, wood selection, figuring of cost, wood machining, wood joinery, fasteners, and wood finishing. Woodturning will also be introduced in this class and students will have the opportunity to turn several items including a pen or mechanical pencil.

PREREQUISITE: Foundations of Technology & Engineering

User fee = \$20

### **110060 Foundations of Technology & Engineering** - Grades 9, 10, 11, 12

1 credit

Look around; everything that does not occur naturally has been designed and produced by someone. Technology education is the study of the design process and the designed world. This is a fun, hands-on course that allows students to explore the various facets of technology to design and create some truly unique projects. As a result, students will develop a deeper and broader technological knowledge base that they can apply to the rest of their lives. Production activities will include the processing of wood, metal, and plastic as related to production technology. Engineering & Communication activities will be focused around the engineering design process, photography, and drafting. Students will also use Adobe Photoshop, Adobe Illustrator, and CNC software. This class is fun for everyone; do not miss out! Students will receive 0.5 credit toward the computer technology graduation requirement upon the completion of this course.

User fee = \$20

### **070050 Guitar Theory and Design** – Grades 10, 11, 12

1 credit (This course is also listed in the Music section of the catalog.)

This co-taught course will be conducted in a music room and production laboratory setting. The course is designed to develop students' musical potential through an introductory study of guitar and guitar design. Each student will design and construct their very own guitar while learning musical theory behind playing a guitar. Emphasis in the musical portion of the class will be placed on posture, tone production, basic technique, reading music notation, and composition. The production portion of the course will focus on safety, CNC production, CADD, Electronics and various Science, Math, Engineering and Technology (STEM) concepts related to guitar building. Additional project supplies for this course will be at the individual student's expense. (Approx. \$125)

### **110070 Robotic Systems** - Grades 9, 10, 11, 12

1 credit

This intense course will bring Legos to life! It will challenge students of all levels to design and fabricate automated systems that are comparable to current industrial technologies. Students will learn the basic robotic skills required to construct and program automated devices. They will gain an understanding of simple and complex machines through problem solving and a hands-on approach.

PREREQUISITE: Foundations of Technology & Engineering

User fee = \$20

### **110080 STEMinar** - Grade 11, 12

1 credit (This course is also listed in the Science section of the catalog.)

This capstone course will provide students with the opportunity to integrate concepts and subject matter from Science, Technology, Engineering, and Math (STEM). Students will be required to *apply* science and math knowledge and basic concepts for design, problem solving, technical writing, computer application, and material processing skills. The culmination of this course will be to develop and construct a design solution to a problem or an integral part of a system. All solutions will be tested, evaluated and redesigned as needed as time permits. Emphasis will be placed on science and math concepts as well as the engineering design process including research, documentation and evaluation of the solution to the design problem. The organizational structure of this course is based on a half-credit science and a half-credit technology. Work will be "Student Driven" and focused on a "Central Project." This philosophy will provide a realistic and meaningful experience for students and to allow for guidance and support throughout the course.

PREREQUISITE: CP Physical Science and CP Biology (CP Chemistry or CP Physics concurrently highly recommended)

User Fee = \$20

## WORLD LANGUAGES

### 120010 French, 120020 Latin, 120030 Spanish - Level I



1 credit

The Level I language course is designed to introduce students to the language and the culture of the countries where the language is spoken, (or in the case of Latin, where the language was spoken). Students will learn high-frequency structures through TPRS (Teaching Proficiency through Reading and Storytelling), as they acquire listening, speaking, reading, and writing skills in context through stories and mini-novels that will increase in difficulty. The majority of instruction will be in the target language. Latin classes will include limited English-language vocabulary study. Emphasis is placed on reading and communication in Latin as well as Latin culture.

### 120040 French, 120060 Spanish - Level II



1 credit

The Level II language course is designed to deepen students' understanding of the language and the culture of the countries where the language is spoken. Students will build upon the concepts and topics introduced in level I through the use of TPRS (Teaching Proficiency through Reading and Storytelling). Students will expand their listening, speaking, writing and reading skills through the exploration of stories and mini-novels that increase in difficulty and utilize high-frequency vocabulary and grammar structures in the target language. The class will be conducted in the target language for a minimum of 90% of the instructional time.

### 120070 Honors French, 120080 Spanish - Level III



1 credit (Weighted)

The Level III language courses are honors weighted courses that are conducted in the target language for a minimum of 90% of the instructional time. Students continue to develop the four basic language skills of listening, speaking, reading and writing. Practical vocabulary will be utilized for students to apply to everyday situations. There is an increased emphasis on speaking and writing, with more in-depth discussions related to the class novels.

### 120090 Honors French, 120100 Spanish - Level IV



1 credit (Weighted)

Honors Level IV is conducted almost exclusively in the target language. Writing activities will consist of prepared and spontaneous assignments. Verbal proficiency is encouraged through impromptu dialogues, and debates. Reading, writing, listening, and speaking in context will be expanded mainly through the exploration of authentic multimedia (music, movies, podcasts, magazines, news websites, etc.), mini-novels, and class discussions.

### 120110 Honors French Culture, Connections & Conversations, 120120 Spanish Culture, Connections & Conversations - Level V



1 credit (Weighted)

Honors Level V class is designed to develop oral fluency and communication based on real-world themes. Emphasis will be placed on a more natural writing and speaking style. This course stresses reading, understanding, and analyzing of classic literature pieces, making connections to the world around us, and a more in-depth study of the culture through the exploration of authentic multimedia (music, movies, podcasts, magazines, online newspapers, news websites, etc.). Students will converse more spontaneously and discuss works using previously learned acquired vocabulary and grammar. At the conclusion of this course, students will be more prepared for conversations with native speakers and travel abroad. The course is taught exclusively in the target language and students are expected to communicate with each other in the target language.

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### Dual Enrollment Courses for Language Study



1 credit each (Weighted)

In addition to Spanish, French, and Latin, Palmyra Area High School, in partnership with Seton Hill University, will be offering the following Dual Enrollment and College in the Classroom courses:



**CA0380 Arabic I-IV**

**CA0370 Japanese I, CA03071 Japanese II, CA0372 Japanese III, CA0373 Japanese IV**

**CA0390 Chinese I-IV**

**CA0400 Russian I-IV**

**CA0410 Latin I**

The main goal for these courses is for students to acquire a culturally contextualized working knowledge and essential skills in a world language. The courses aim at developing four basic skills; reading, writing, listening, and speaking and at building a solid foundation in preparation for more advanced studies.

Students interested in a *Global Personalized Academics* online language course can earn 3 college credits per semester of study. Students will be responsible for the cost of each of the 3 college credit courses and the required textbook. Interested students should express their interest to their guidance counselor. All *Global Personalized Academics* college level course are weighted as AP-level courses.



## **CAREER AND TECHNOLOGY CENTER**

### **PROGRAMS (2019-2020)**

**Selecting a career is one of the most important decisions a student can make. We encourage all students to consider programs offered at the Career and Technology Center (CTC).**

**For further information, check our website at [www.lcctc.edu](http://www.lcctc.edu)**

## **Did you know . . .**

- ❖ CTC students excel in a “learning by doing” environment which combines academics and lab work.
- ❖ CTC students earn college credits from colleges and technical schools by successfully completing CTC courses.
- ❖ CTC students receive scholarships from area businesses who recognize excellent craftsmanship and academic achievement.
- ❖ CTC students continue to participate in sports and extracurricular activities at their high schools.
- ❖ Cooperative Education, Clinical Experience and Job Shadowing services expand the CTC curriculum by providing students with additional skills through supervised work experience at local businesses. In addition to the cooperative education program, job placement services are available to all graduates.
- ❖ The CTC provides counseling services to assist students with personal and social issues, decisions related to career choice, and decisions related to postsecondary opportunities and college credits.
- ❖ The CTC provides support to students who are disabled or disadvantaged. The support is designed to help each student successfully complete the program and secure employment or postsecondary education.
- ❖ The CTC takes every opportunity to recognize and reward students who strive for excellence. This recognition includes: National Technical Honor Society, scholarships, student-of-the-month and year awards, outstanding achievement, perfect attendance, honor roll, certificates and extensive recognition for student organization achievements.
- ❖ Student participation in program related organizations is strongly encouraged. They provide each student with opportunities to develop leadership skills, excel in technical skills, receive recognition for state and national competitions, and travel throughout the state and nation. The organizations include: LCBA – Lebanon County Builders Association – Student Chapter  
HOSA – Health Occupations Students of America  
SkillsUSA – Vocational Industrial Clubs of America

**HALF-DAY TWO YEAR PROGRAMS**

Fourteen CTC programs are offered for a half-day for two years. These programs are open to students beginning in the junior year.

- |   |                                      |
|---|--------------------------------------|
| <b>Auto Body Technology</b>               | <b>Automotive Technology</b>         |
| <b>Carpentry/Residential Construction</b> | <b>Computer Repair Technology</b>    |
| <b>Diesel Truck Technology</b>            | <b>Electrical Technology</b>         |
| <b>Electromechanical Technology</b>       | <b>Industrial Machine Technology</b> |
| <b>Law Enforcement and Security</b>       | <b>Masonry</b>                       |
| <b>Medical Assistant</b>                  | <b>Network Technology</b>            |
| <b>Plumbing/Heating/Air Conditioning</b>  | <b>Welding Technology</b>            |

**AUTO BODY TECHNOLOGY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**  
**(HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO)----- (36 WEEKS, 3 CREDITS)**

Auto Body Technology students repair damaged vehicles to like-new condition. Utilizing the latest technology, they rebuild damaged vehicles and learn body and frame alignment, parts repair/replacement including the latest fiberglass and plastic components, MIG welding, trim, accessories, interior components, glass replacement, and painting including basecoat/clearcoat/striping. Career opportunities range from the reconditioner to the collision repair technician and may begin in high school with a Co-Op position providing job experience and a salary. Students who successfully complete the program may receive college credits from PA College of Technology and the Automotive Training Center.

**AUTOMOTIVE TECHNOLOGY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**  
**(HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO)----- (36 WEEKS, 3 CREDITS)**

Automotive Technology students diagnose, service, and repair late model vehicles following the Automotive Service Excellence (ASE) and Automotive Youth Educational System (AYES) national technician standards. Motivated students may obtain the PA Auto Safety Inspection Certification, PA Emission Inspection Certification and qualify to take the ASE tests after successfully completed the program. Students who are selected into the AYES program are guaranteed employment with a local auto dealership and may opt to complete two additional years of college. Utilizing state-of-the-art repair equipment students learn brake systems, suspension and steering, engine performance, automotive electronics, and HVAC. Technical career opportunities range from maintenance mechanic to automotive technician and may begin in high school with a Co-Op or an AYES internship providing job experience and a salary.

Students who successfully complete the program may receive 16 college credits from HACC. In addition, students can also earn credits from University of Northwestern Ohio, Automotive Training Center, and Northampton Community College.

**CARPENTRY/RESIDENTIAL CONSTRUCTION**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**

**(HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO)----- (36 WEEKS, 3 CREDITS)**

Carpentry students work on construction projects within the school and community. They learn skills including: transit and blueprint reading, selection of building materials and estimating, framing (floors, stairs, walls, and roofs), selection and installation of windows and doors, roofing, interior and exterior finishing, concrete finishing, and foundations. Career opportunities range from a siding installer to a finish carpenter and may begin in high school with a Co-Op position providing job experience and a salary. The 500 employers in the Lebanon County Builders Association sponsor this program, provide student scholarships, and employ graduates. Students who successfully complete the program may receive college credits from HACC, Penn College of Technology, and Thaddeus Stevens College of Technology.

**COMPUTER REPAIR TECHNOLOGY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 Credits)**

**(HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO) ----- (36 WEEKS, 3 Credits)**

Computer Repair Technology – Based on the industry standard CompTIA A+ Certification, students use the latest technology to learn how modern computer equipment works. Hands on projects mixed into the high tech curriculum help develop technical expertise for the rapidly growing career opportunities in computer repair, help-desk support and entry-level networking positions. Mock job interviews and help desk scenarios help develop the “Soft Skills” needed for face-to-face customer support, helping prepare the students for the important job of troubleshooting both hardware and software issues in a real-world environment. This course will equip the student to pass the CompTIA A+ certification test. Up to six college credits may be awarded by accredited colleges or technical schools upon successful completion of this CTC program.

**DIESEL TRUCK TECHNOLOGY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**

**(HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO)----- (36 WEEKS, 3 CREDITS)**

Diesel Truck Technology students restore late model over-the-road diesel truck-tractors to like new condition. Each year they refurbish or repair vehicles providing “hands-on” experience in diagnosing, servicing and repairing all major heavy truck systems. Students learn the importance of teamwork and qualify for the PA State Safety Inspection program. The major course topics include: Preventive Maintenance, Engine Systems Theory & Repair, Electrical Systems, and Brakes (air & hydraulic), Power Trains, Steering, Suspension and Drivelines. Career opportunities range from maintenance mechanic to fleet manager, and may begin in high school with a Co-Op position providing job experience and a salary. Employers in the South Central Motor Truck Association sponsor this program, provide

student scholarships, and employ graduates. Students who successfully complete the program may receive college credits from the University of Northwestern Ohio (UNOH) and Automotive Training Center.

### **ELECTRICAL TECHNOLOGY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**

**(HALF-DAY, 11:35 A.M. –2:10 P.M. – YEAR TWO)----- (36 WEEKS, 3 CREDITS)**

Electrical Technology students design and install the electrical systems in the school’s construction projects and work on numerous projects within the community. They learn technical skills including AC/DC fundamentals, residential, commercial and industrial wiring, AC/DC motors and generators, industrial motor control, troubleshooting and the operation of programmable logic controllers. Technical careers range from an electrician to a systems engineer and may begin in high school with a Co-Op position providing job experience and a salary. The 500 employers in the Lebanon County Builders Association sponsor this program, provide student scholarships and employ graduates. Completion of this program with the College-in-the-High School option may also provide students with eight HACC college transferrable credits.

### **ELECTROMECHANICAL TECHNOLOGY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**

**(HALF-DAY, 11:35 A.M. –2:10 P.M. – YEAR TWO)----- (36 WEEKS, 3 CREDITS)**

The Electromechanical Technology program is designed to provide students with the knowledge and skills necessary to apply current methods and technology to the development, design, operation, and management of electromechanical systems. Electromechanical covers multiple disciplines including Electrical, Electronics, Fluid Power (Hydraulics and Pneumatics), Mechanical Drives, Programmable Logic Controllers (PLC’s), and Robotics. Students are trained in both the electrical and mechanical disciplines, and then exposed to a wide spectrum of instrumentation and industrial controls concepts. Students can use what they learn in Electromechanical Technology to pursue a career directly out of high school or continue their education into a degree program. The course is designed to give an introduction to engineering principles of electromechanical systems and disciplines. Some of the potential jobs include Electronics Technicians/Engineer, Electrician, Biomedical Technician/Engineer, Industrial Maintenance Technician, Mechanical Engineer, Programmer, and many more!

### **INDUSTRIAL MACHINE TECHNOLOGY**

**(HALF-DAY, 8:05 A.M. –10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**

**(HALF-DAY, 11:35 A.M. –2:10 P.M. – YEAR TWO) ----- (36 WEEKS, 3 CREDITS)**

Industrial Machine Technology students manufacture precision parts in the school’s NIMS (National Institute for Metalworking Skills) authorized training center. The curriculum provides in-school instruction on topics such as: quality control, benchwork, blueprint reading, computer controlled machines (lathes/milling machines), and manual machines (saws /drills /grinders /lathes and milling machines). Career opportunities range from machine operator to tool and die maker or mechanical engineer and may begin in high school with a Co-Op position providing job experience and a salary. Students who successfully complete the program may receive seven college credits from HACC as well as credits from PA College of Technology and Thaddeus Stevens College of Technology.

### **LAW ENFORCEMENT AND SECURITY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 Credits)**

**(HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO) ----- (36 WEEKS, 3 Credits)**

Law Enforcement and Security students develop investigation skills essential to careers in Criminal Justice (Police, Courts, and Corrections) and the ever growing Private Security fields. They also have the opportunity to experience parts of the Criminal Justice System through job shadowing experiences in the real world. The program emphasizes curriculum that covers topics such as: criminal procedures, crime photography, criminal investigations, criminal law, Bill of Rights/US Constitution, vehicle law, private security, report writing, and first aid/CPR. Career opportunities range from private security to local, state, and federal officers and federal police officers. Students who successfully complete the Pennsylvania Department of Education approved program and the NOCTI exam (end of the year assessment) on the criminal justice system may receive college credits from HACC and other area colleges.

**MASONRY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**

**(HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO) ----- (36 WEEKS, 3 CREDITS)**

Masonry students work on construction projects that include concrete block, brick and other similar materials. Most of the training is within the school; however, community service projects add additional learning opportunities. Students develop a highly skilled craft which includes the ability to lay a multitude of contemporary concrete building products as well as traditional brick. Additional topics include: blueprint reading, site layout, estimating, building codes, and the use of hand and power tools. Career opportunities range from a mason’s helper to blocklayer, bricklayer, estimator, or construction supervisor and may begin in high school with a Co-op position providing job experience and a salary. The 500 members in the Lebanon County Builders Association as well as the Pennsylvania Concrete Masonry Association sponsor this program, provide student scholarships and employ graduates. A student who successfully completes this program may earn three college credits from HACC.

**MEDICAL ASSISTANT**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**

**(HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO) ----- (36 WEEKS, 3 CREDITS)**

Medical assistants are professional, multi-skilled individuals who perform administrative and clinical duties in health care settings. The program includes studies in anatomy and physiology, health insurance coding and billing, medical terminology, medical law and ethics, pharmacology, clinical and administrative skills, phlebotomy, laboratory tests, and performing and interpreting electrocardiograms.

**NETWORK TECHNOLOGY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 Credits)**

**(HALF-DAY, 11:35 A.M. – 2:10 P.M. – YEAR TWO) ----- (36 WEEKS, 3 Credits)**

Network Technology – In today’s high-tech environment, everything is networked!!! Following the CompTIA Network + Certification model, students learn the features and functions of networking components including how to install, configure and troubleshoot basic networking hardware, protocols and services. Completion of this course will

prepare students for entry-level jobs in computer networking or give them a boost as they continue their education while pursuing a career as a network administration, network support technician, network administrator or network analyst. Fundamental topics to be covered include: The Foundations of Networking, the OSI/802 Model, Network Design, Network Cabling, Wireless Communication, TCP/IP, WAN Devices, Security Issues and Disaster Recovery Training. The goal is for students to seek Network+ certification after completion of the course. Students who successfully complete the program may receive up to four college credits awarded by accredited colleges or technical schools.

**PLUMBING, HEATING, AIR CONDITIONING**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**  
**(HALF-DAY, 11:35 A.M. –2:10 P.M. – YEAR TWO) ----- (36 WEEKS, 3 CREDITS)**

Students interested in the plumbing profession can begin their training at the CTC in the Plumbing, Heating, and Air Conditioning program which is a Pennsylvania Builders Association accredited program and tailored after the Pennsylvania College of Technology’s first year HVAC skills list .They will begin their technical training learning safe work practices, materials and tools used in the trade, and applied mathematical and scientific concepts needed to build a strong foundation for more advanced topics. Our students “learn by doing” by working on a variety of skills trainers and equipment designed to simulate actual field installations. Students also have the opportunity to earn industry recognized certifications such as the OSHA 10 construction safety certification and the EPA Section 608 Refrigerant Transition and Handling certification. Dual enrollment opportunities with Thaddeus Stevens College of Technology are also available while enrolled in the program.

Post-secondary opportunities exist for those completing the CTC Plumbing, Heating, and Air Conditioning program such as craft apprenticeships where students “earn while they learn” graduating debt-free from industry recognized programs. Associate and Bachelor degree programs are available for those choosing careers as sales engineers, designers, and similar professions requiring advanced degrees.

**WELDING TECHNOLOGY**

**(HALF-DAY, 8:05 A.M. –10:40 A.M. – YEAR ONE) ----- (36 WEEKS, 3 CREDITS)**  
**(HALF-DAY, 11:35 A.M. –2:10 P.M. – YEAR TWO)----- (36 WEEKS, 3 CREDITS)**

Welding Technology students design, fabricate and repair metal products in the school’s shop facilities. They develop skills in testing procedures necessary to meet standards for welding certification and practice welding techniques according to the requirements of the American Welding Society. Utilizing state-of-the-art equipment, students learn shielded metal, gas metal, gas tungsten and flux core arc welding, blueprint reading, gas welding and brazing, oxy-fuel cutting, metal layout and fabrication, computerized numerical control cutting, plasma cutting of sheet and plate metals, and structural and robotic welding. Technical careers range from a metal fabricator to an underwater welder. These opportunities may begin in high school with a Co-Op position providing job experience and a salary. Students who successfully complete the program may receive six college credits from HACC or entry level welder certification. The program is nationally recognized by the AWS (American Welding Society).

**FULL - DAY PROGRAMS**

Eight CTC programs are offered for a full day, 8:05 A.M. – 2:10 P.M. The programs are open to seniors.

- Commercial Art and Design**
- Culinary Arts**
- Dental Assistant**
- Health Careers Technology**
- Landscape Technology**
- Media Communications Technology**
- Pastry Arts**
- Sports Therapy Sciences**

**COMMERCIAL ART AND DESIGN**

**(FULL-DAY, 8:05 A.M. – 2:10 P.M.) ----- (36 WEEKS, 7.5 CREDITS)**

Commercial Art students work with a variety of media to create logos, brochures, posters, advertisements, greeting cards and a variety of artwork for the school and the community. They participate in Art Shows and Competitions to develop a portfolio emphasizing their creative talents and technical skills including mastery of state-of-the-art computer systems and software such as: QuarkXpress, Adobe Illustrator, and Adobe PhotoShop. This “learning while doing” strategy brings reality to the course topics, which includes: typography, media techniques, color theory, graphic design, perspective, and computer applications. This full day course promotes creativity and expression through photography, web design and animation. Career opportunities range from a production artist to a creative director. Certifications can be received from Adobe and Certified Photographic Consultants. Graduates have been successful at four-year colleges and a number of students have won scholarships at two-year art schools. Students who successfully complete this program may earn college credits from Pennsylvania College of Art and Design and The Art Institute of Pittsburgh.

**CULINARY ARTS**

**(FULL-DAY, 8:05 A.M. – 2:10 P.M.) ----- (36 WEEKS, 7.5 CREDITS)**

Culinary Arts students operate a contemporary sixty-seat full service restaurant located within the school. They plan, prepare and serve a variety of traditional, ethnic, and contemporary menus as well as cater banquets, dinner meetings, and special events. Students develop artistic skills through ice carvings and special exhibits of pastillage, tallow, and aspic work. Local, state, and national competitions enrich the curriculum which includes: appetizers, soups and sauces, vegetables and salads, meat/poultry/seafood/shellfish, desserts, garnishing, catering, service, sanitation, and management. Career opportunities range from a prep cook to an executive chef and may begin in high school with a Co-Op position providing job experience and a salary. Students who successfully complete the program may receive college credits from PA College of Technology, HACC, Johnson & Wales University, Pennsylvania Culinary Institute,



and The Restaurant School. The program is nationally recognized and certified by the American Culinary Federation (ACF).

**DENTAL ASSISTANT**

**(FULL-DAY, 8:05 A.M. – 2:10 P.M.) ----- (36 WEEKS, 7.5 CREDITS)**

The Dental Assistant program integrates lectures, demonstrations and hands-on experiences to teach students a variety of dental-related subjects. The major areas of study include anatomy and physiology, chair-side dental assisting, radiology, dental materials and microbiology/sterilization. During the program, students participate in clinical rotations in private dental offices, clinics and hospitals. Experience gained in the Dental Assistant program prepares students to take the Commonwealth of Pennsylvania State Dental Radiology Certification Test.

**HEALTH CAREERS TECHNOLOGY**

**(FULL-DAY, 8:05 A.M. – 2:10 P.M.) ----- (36 WEEKS, 7.5 CREDITS)**

Health Careers Technology students who are interested in a career as a nursing assistant (NA) can complete the requirements for the exam by mid-year. Successful performance on the exam will provide the opportunity for immediate paid employment at local nursing care facilities. Students also earn certification in adult, child, and infant CPR and AED as well as first aid skills through the American Red Cross. They learn to be caregivers and prepare for the state Nurse Aide Competency Exam through a curriculum that includes topics such as: patient care skills, anatomy and physiology, medical terminology and ethics, nutrition, environmental cleanliness, record keeping, and safety.

Students interested in getting a head start on a Licensed Practical Nursing (LPN) career may qualify for advanced placement in the adult CTC LPN program. They will complete a portion of the curriculum for Level 1 of the LPN program, which allows them to enroll in the LPN program at a reduced cost. There is also a reduction in the number of hours required to attend Level 1.

Completion of the full year Health Careers Technology program with the College-in-the-High School option also provides three HACC transferrable credits.

**LANDSCAPE TECHNOLOGY**

**(FULL-DAY, 8:05 A.M. – 2:10 P.M.) ----- (36 WEEKS, 7.5 CREDITS)**

In Landscape Technology, you will work with the tools, equipment, and techniques needed to design, install, and maintain beautiful landscapes for private residences as well as commercial properties. You will use hand tools and power equipment including rototillers, string trimmers, leaf blowers, and commercial mowers. You will also receive training on a state-of-the-art piece of excavation equipment, a skid-steer loader. You will practice building paver patios, walkways, retaining walls, and other hardscape projects. You will participate in volunteer work experience trips all around the county. Qualified students in Landscape Technology may also be chosen for the co-op program, an opportunity to work for area landscape contractors and earn while you learn. If you enjoy working outside year round shaping and creating landscapes, then the landscape technology program will be a great fit and learning experience for you.

**MEDIA COMMUNICATIONS TECHNOLOGY**

**(FULL-DAY, 8:05 A.M. – 2:10 P.M.) ----- (36 WEEKS, 7.5 CREDITS)**

Students enrolled in the Media Communications Technology program develop the necessary skills to be successful in the work place or post-secondary education. Using state of the art technology, students create a wide array of media projects while gaining necessary job skills.

Media Communications Technology students develop a portfolio emphasizing their creative talents and technical skills including mastery of computer systems, software, cameras, and lighting. Students create photographic and video projects for the school, civic groups, and business clients.

The program emphasizes a “hands on” curriculum which covers topics such as: digital imaging, portraiture, photo composition, lighting, animation, web page design, digital audio, video scripting/storyboarding, videography, EFP video, studio production, digital nonlinear editing, 3D animation, and multimedia CD ROM production. Career opportunities include photographers, radio announcers, and videographers.

**PASTRY ARTS**

**(FULL-DAY, 8:05 A.M. – 2:10 P.M.) ----- (36 WEEKS, 7.5 CREDITS)**

The Lebanon County Career & Technology Center Pastry Arts Program was the first nationally recognized and certified secondary program by the American Culinary Federation Education Foundation (ACF) in the country.

Pastry Arts students produce and market high quality baked products for a contemporary sixty-seat restaurant within the school. They also market their products through their own pastry shop as well as supplying items for school banquets, dinner meetings, community service projects, and specialty events. Students develop artistic skills through the preparation of pastries, confections, and other specialty desserts. Students will create and present a professional portfolio and restaurant programs as an end of the year assessment. Local, state and national competitions enrich the curriculum which includes: pastry bag skills, cornet skills, cake decorating and assembly, decorative pieces including a Gingerbread House and Pumpkin Carving competition, merchandising, record keeping, and sanitation. Career opportunities range from a baker’s helper to a pastry chef and may begin in high school with a Co-Op position providing job experience and a salary. Students who successfully complete the program may receive college credits from Johnson & Wales, West Moreland Community College, PA College of Technology, Harrisburg Area Community College, Art Institutes, and The Restaurant School at Walnut Hill College.

**SPORTS THERAPY SCIENCES**

**(FULL-DAY, 8:05 A.M. – 2:10 P.M.) ----- (36 WEEKS, 7.5 CREDITS)**

Sports Therapy Sciences students will gain knowledge of pre-participation health and fitness assessments to design individual exercise and rehabilitation programs. Our goal is to provide an education that will encourage our students to continue their studies in fields such as athletic training, physical therapy, occupational therapy and other health and fitness related fields. Our curriculum includes: human anatomy and physiology, medical terminology, basic first aid and CPR, injury management and personal training. At the conclusion of our program, each student will be eligible to take a personal training certification examination.

**HALF-DAY YEAR ONE AND FULL-DAY YEAR TWO PROGRAM**

This program is offered for a half-day in year one and a full-day in year two. The program is open to students in the junior year.

**Cosmetology**

**COSMETOLOGY**

**(HALF-DAY, 8:05 A.M. – 10:40 A.M. OR 11:35 A.M. – 2:10 P.M. - YEAR ONE) -- (36 WEEKS, 3 CREDITS)**

**(FULL-DAY, 8:05 A.M. – 2:10 P.M. -YEAR TWO)-- ----- (36 WEEKS, 7.5 CREDITS)**

Cosmetology students learn skills necessary to become a licensed professional in a salon. Major topics include hairstyling, haircutting, perming, chemical relaxing, haircoloring, manicuring, facials and makeup. Students learn the theory and procedures about these topics. When finished with the program and state mandated hours, students must take and pass a state board exam to receive a cosmetology license.