


Quakertown High School
2014-2015 Programs of Study



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How to use this digital document: All items in the Table of Contents and in each grade level Program of Study hyperlink to their corresponding course areas inside of the document. You can return to the Table of Contents from inside of the document when you click on the words "Back to the Table of Contents" or by clicking on this blue icon in any section heading:  Click on [blue, single underlined text](#) to visit external links. Click on [blue, double-underlined text](#) to view the term and definition in the Glossary. Click on banners like this to view course description videos: 

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MUSIC

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Concert Band
Panther Band
Tradition Band
Concert Band and Chorus

PHYSICAL EDUCATION

Physical Education, C
Physical Education – Movement and Exercise Science 1

SCIENCE

Biology 9 Honors
General Science 9, C
General Science 9 Honors, C

SOCIAL STUDIES

AP Human Geography
United States History 2, C
United States History 2 Honors, C
United States History Gifted Seminar

TECHNOLOGICAL STUDIES

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Introduction to Engineering Design

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ART

Advanced Crafts
AP Art History
Art History, C
Design Concepts in Art, C
Digital Photography
Digital Communication
Dimensional Art and Surface Texture
Fine Arts 1
Fine Arts 2
Fine Arts 3
Fine Arts 4
Introduction to Crafts

BUSINESS AND INFORMATION TECHNOLOGY

Accounting 1
Accounting 2 Honors
Business Law
Entrepreneurship
Interactive Media
International Business
Introduction to Business, C
Personal Finance, C
Sports Entertainment and Hospitality Marketing

DUAL ENROLLMENT [click for \(INFORMATION\)](#) [\(DESCRIPTION\)](#) [\(GLOSSARY\)](#)

Basic Problems of Philosophy
Introduction to Psychology
Introduction to Sociology
Medical Career Pathways Program
Principles of Economics: Macroeconomics

ENGLISH

American Literature, C
American Literature Honors, C
AP English Language and Composition
AP English Literature and Composition
British Literature Full Year, C
British Literature Full Year Honors, C
Creative Writing, C
English Gifted Seminar
English Literature and Composition
Fundamentals of Composition
Journalism 1
Journalism 2

Journalism 3
Journalism 4
Public Speaking
Senior English
World Literature, C
World Literature Honors, C
Yearbook

FAMILY AND CONSUMER SCIENCE

21st Century Leadership
Fashion Design 1
Fashion Design 2
Fashion Design 3
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Foods For a Healthy Lifestyle
Multicultural Foods
Parenting
Personal Growth, C

FIELD STUDY

Field Study

HEALTH AND PHYSICAL EDUCATION

Health 1, C
Health 2, C
Kinesiology – History, Sociology and Psychology of Sports
Kinesiology – Sciences of Sport and Movement
Movement and Exercise Science (MES) 1
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Physical Education, C

MATHEMATICS

Algebra 1, C
Algebra 1B
Algebra 2A
Algebra 2, C
Algebra 2 Honors, C
AP Calculus AB
AP Calculus BC
AP Computer Science: JAVA
AP Probability and Statistics
Calculus
Computer Programming 1
Computer Programming 2
Geometry, C
Geometry Honors, C (only)
Introduction to College Math

Precalculus, C
Precalculus Honors, C

MUSIC

AP Music Theory
Pop, Rock and Jazz
Senior High Choir
Symphonic Band
Symphonic Band and Choir

SCIENCE

Anatomy and Physiology
AP Biology
AP Chemistry
AP Environmental Science
AP Physics 1
AP Physics 2
Biology, C
Biology Honors, C
Chemistry, C
Chemistry Honors, C
Environmental Science
Forensics
Introduction to Chemistry
Introduction to Physics
Physics, C

SOCIAL STUDIES

AP European History
AP Psychology
AP United States History
AP United States Government and Politics
AP World History
Political Science, C
Political Science Honors, C
Psychology, C
Sociology and Anthropology, C
United States History 3, C
United States History 3 Honors, C
World Cultures, C
World Cultures Honors, C

TECHNOLOGICAL STUDIES

Project Lead the Way Courses
Biotechnical Engineering
Civil Engineering and Architecture
Computer Integrated Manufacturing
Digital Electronics
Engineering Design and Development

Introduction to Engineering Design
Principles of Engineering

Non-Project Lead the Way Technical Studies Courses
TV News/Video Editing 1
TV News/Video Editing 2
TV News/Video Editing 3

WORLD LANGUAGE

German Courses

German 1, C
German 2
German 2 Honors
German 3
German 3 Honors
German 4 Honors

Mandarin Courses

Mandarin 1, C
Mandarin 2, C
Mandarin 3, C
Mandarin 4, C

Spanish Courses

AP Spanish Language
Introduction to Spanish
Spanish 1, C
Spanish 2, C
Spanish 2 Honors, C
Spanish 3
Spanish 3 Honors
Spanish 4 Honors

SPECIAL PROGRAMS AND SERVICES

Adapted Physical Education
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Programs for Learning Support and Emotional Support Students
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Upper Bucks County Technical School45

UBCTS Course Offerings

Animal Technology
Auto Collision Technology
Automotive Technology
Baking and Pastry Arts
Cabinetmaking

Career Internship Program
Carpentry
Construction Technology
Cosmetology
Culinary Arts
Dental Careers
Diesel Technology
Electrical Technology
Graphic Communications
Health Care Careers
Landscape Construction and Plant Technology
Law Enforcement/Criminal Science
Machining Technologies
Plumbing Technology
Small Engine Technology
Welding and Fabrication Technology

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Advanced Placement (AP) Course (see Course, Advanced Placement (AP))
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Blackboard
Class Rank
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Competency/Competencies
Core Academic Course (see Course, Core Academic)
Course, Advanced Placement (AP)
Course, Core Academic
Course, Dual Enrollment
Course, Elective
Course, General Interest
Course, Specialized Interest
Course Quality Points
Credit
Cumulative Grade Point Average (see Grade Point Average, Cumulative)
Cyber
Dual Enrollment Course (see Course, Dual Enrollment)
Distinguished Honor Roll (see Honor Roll, Distinguished)
Elective Course (see Course, Elective)
Eligible Content
Embedded Assessment (see Assessment, Embedded)
Fail
Formative (see Assessment, Formative)
General Interest Course (see Course, General Interest)

Grade Point Average (GPA)
Grade Point Average, Cumulative
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Grade Point Average, Weighted
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Honor Roll, Distinguished
Individual Education Program (IEP)
National Collegiate Athletic Association (NCAA)
Pass-Fail
Pennsylvania Core (PA Core)
Pennsylvania Department of Education (PDE)
Pre-requisite
Proficient/Proficiency
Programs of Study
Quality Points (see Course Quality Points)
Rank (see Class Rank)
Remediate
Remediation (see Remediate)
Specialized Interest Course (see Course, Specialized Interest)
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Unweighted Grade Point Average (see Grade Point Average, Unweighted)
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Graduation Requirements

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Each student in the High School must carry a full schedule each year in order to be classified as a full-time student. In exceptional cases, a student may be allowed to carry fewer courses with the approval of the high school principal. Promotion from one grade to the next, and ultimately, graduation, will be based on the satisfactory completion of individual courses.

	QCHS Full Time	UBVTS Students who begin in Grade 9	UBVTS Students who begin in Grades 10-11	UBVTS Students who begin in Grade 12
English	4.0	4.0	4.0	4.0
Social Studies	4.0	3.0	4.0	4.0
Science	4.0	3.0	3.0	4.0
Mathematics	4.0	3.0	3.0	4.0
Physical Education	1.5	1.0	1.0	1.5
Health	1.0	1.0	1.0	1.0
<u>Elective</u>	5.5	9.0	8.0	5.5
	24 <u>credits</u>	24 <u>credits</u>	24 <u>credits</u>	24 <u>credits</u>

To be eligible for graduation, students must complete a minimum of 24 credits, as defined in board policy.

Graduates must meet all graduation criteria described below:

1. Successfully complete an approved [program of study](#).
2. Complete a senior/graduation project according to district standards.

Graduates in the Class of 2017 and beyond must meet all graduation criteria described below:

1. Successfully complete an approved [program of study](#).
2. Complete a senior/graduation project according to district standards.
3. Demonstrate one of the following options based on student's performance on the Keystone exams and programming options:
 - a. Demonstrate [proficiency](#) on the Keystone Exams in Algebra 1, Biology, and Literature.
 - b. Demonstrate [proficiency](#) on a project-based [assessment](#) in one or more of the areas assessed by the Keystone Exams.
 - c. Meet [IEP](#) goals as outlined by the [IEP](#) team.

Please note that Keystone Exam requirements are subject to change based on PA School Code updates and revisions.

Senior Status: Students will be placed in Grade 12 if the student can reach all academic graduation requirements by the conclusion of the school year.

[Advanced Placement \(AP\)](#) Courses

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Students have opportunities to take many different [Advanced Placement \(AP\)](#) Courses in high school. [AP](#) courses in the Programs of Study are identified with an "[AP](#)" in front of the course name. [AP](#) courses follow a strict set of standards set by the College Board. The College Board is a not-for-profit membership organization committed to excellence and equity in education. Their mission is to connect students to college success and opportunity.

Source: [College Board Website](#)

Cumulative Grade Point Averages

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Two [cumulative grade point averages \(GPA\)](#) are reported on the transcript – [unweighted](#) and [weighted](#). Both cumulative GPA's are computed at the close of each school year and include all graded courses, 9-12. The unweighted GPA is computed by multiplying the final course grade's numerical value with the assigned course [credit](#) to equal the [course quality points](#). The sum of [quality points](#) from all courses attempted is divided by the total [credit](#) value of all courses attempted to determine the [unweighted](#) GPA.

Beginning with the class of 2011, the weighted GPA includes an additional quarter point awarded for all Honors, Project Lead the Way (PLTW) and [Dual Enrollment](#) courses taught by a community college professor. An additional half point is awarded for all [AP](#) courses. (Additional quarter/half points are only received if the earned grade is a "C" or above).

Numerical Value of Final Grades (Unweighted Courses)

A = 4
B = 3
C = 2
D = 1
F = 0

Numerical Value of Final Grades (Honors, PLTW, [Dual Enrollment](#) Courses)

A = 4.25
B = 3.25
C = 2.25
D = 1
F = 0

Numerical Value of Final Grades ([AP](#) Courses)

A = 4.5
B = 3.5
C = 2.5
D = 1
F = 0

Cyber Courses

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For motivated, self-directed, focused learners, [cyber](#) learning may be a possibility. [Cyber](#) courses are indicated with a "C" after the course title in the [Programs of Study](#). [Cyber](#) courses offer several distinct advantages.

Students may alleviate conflicts in their schedule with a [cyber](#) course. Student learning modalities for a particular subject may be best addressed through [cyber](#) means. The opportunity for students to accelerate at an individualized pace may be available utilizing [cyber](#) courses.

Strategies, which blend [cyber](#) learning with traditional class work, can enhance student engagement and learning. [Cyber](#) learning extends through the innovative use of information and communications technology including webcam and Internet 2.0 tools such as online discussion board.

Cyber courses listed in the Programs of Study are taught by teachers in the [QCSD Cyber Program](#), [Bridges Virtual](#) online learning program, [MyLanguage360.com](#) online learning program and in the [BlendedSchools.net Language Institute](#).

Additional World Language Course Subjects Available:

- [MyLanguage360.com Language Courses](#)
- [BSN Language Institute Language Courses](#)

Dual Enrollment Opportunities

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Quakertown High School has established relationships with a variety of post secondary institutions in which students may apply to earn college [credit](#) for courses that are taught through various mediums within the high school day. More information about [Dual Enrollment](#) opportunities will be available to students during course selection. [Dual Enrollment](#) courses offered at the high school taught by local college professors are weighted as honors level courses.

Grading

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QCSD School Board directed grading policy for Grades 9-12 for 2014-2015 school year:

- Grading will be based on points and conform to Pennsylvania Common Core Standards.
- All student work will be evaluated and count toward academic grades including homework.
- Final exams and midterms will be strongly encouraged and will be at the discretion of the teacher. Keystone and AP Tested subjects will be considered in the decision.
- Schoolwork assignment deadlines will be enforced; how will be up to the teacher.
- Remediation will have specific parameters.

Honor Roll

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To be eligible for [Honor Roll](#) status, a student must obtain an overall [grade point average](#) of 3.5. No student is eligible for [Honor Roll](#) status who receives a grade lower than a "C."

To be eligible for [Distinguished Honor Roll](#) status, a student must obtain an overall [grade point average](#) of 3.75. No student is eligible for [Distinguished Honor Roll](#) who receives a grade lower than a "B."

In addition, in order to be eligible for either [Honor Roll](#) or [Distinguished Honor Roll](#) status, a student's employability grades must all be above a "2."

National Collegiate Athletic Association (NCAA)

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The [National Collegiate Athletic Association \(NCAA\)](#) serves to support the student athlete in college. Each college decides if it belongs to NCAA Division 1, Division 2 or Division 3. The college makes that decision by matching its enrollment, financial situation and fan support with the requirements for each division. Then the school must meet those requirements each year.

Click on the links below for more information about the NCAA and its course standards for the college bound athlete.

- Search for "Quakertown" to learn which course offerings meet [NCAA](#) standards [here](#).
- Visit the [NCAA](#) Eligibility Center for Students [here](#).
- Browse the [NCAA](#) Guide for the College Bound Student Athlete [here](#).
- Review the [NCAA](#) Eligibility Quick Reference Sheet [here](#).
- Download the [NCAA](#) Division 1 and 2 Worksheets [here](#).

Source: [NCAA Website](#)

Scheduling

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Students and parents are requested to be thoughtful and thorough in their selection of courses. All students are expected to continue in, and complete, the courses selected. Any student requesting an [Advanced Placement \(AP\)](#) course must understand there is an expectation regarding the willingness to remain committed to the course and the expectations.

Adequate schedule planning for students, teachers, and classroom space can be completed only when school officials can consider student schedule requests to be final and binding. There are times when a change in this schedule request is

desired. When this happens, a conference with a guidance counselor is required. Parents should be involved with this conference in order to assist the student and counselor to arrive at a reasonable decision. Therefore, all schedule changes will be made at the discretion of building administration and guidance.

Scheduling Parameters

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The high school daily schedule consists of 7 class periods. Students are required to maintain a full schedule. The opportunity to participate in additional courses may be provided by [cyber](#) instruction. Required [core academic](#) courses are year-long. [Elective](#) opportunities may either be year-long or semester-based. Students should consult with teachers, counselors, and their parent(s) prior to selecting an appropriate [program of study](#).

The number of students electing a course and the availability of teachers will determine whether or not a course will be offered.

Summer School/Tutoring

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A student who has [failed](#) a required course must take some action to [remediate](#) his/her situation. There are three options available:

1. Pass an approved summer school course in the [failed](#) subject area prior to the opening of the next school year.
2. Secure private tutoring in the [failed](#) subject area by a certified teacher prior to the opening of the next school year (tutor must be approved by the principal). Course must align to district standards and students must receive a passing grade.
3. Repeat the course during the regular school year.

The guidance office will contact students who have [failed](#) courses. The counselors will advise them on the options available for their specific situation. A student may also repeat any [elective](#) course he/she [fails](#).

Weighted [Class Rank](#)

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The [class rank](#) is computed at the close of each school year and includes all graded courses, 9-12. [Pass-fail](#) courses are not included. The [class rank](#), as reported on the transcript, is a weighted percentile [ranking](#). The cumulative weighted GPA is used to generate the [class rank](#). This weighted percentile [rank](#) will appear on the student's transcript.



Grade 9 [Program of Study](#)

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Student Name _____

[Cyber](#) instruction is available for courses listed with "C." Courses taught only online are listed with "C (only)." Learn more about online courses [here](#).

Required [Core Academic Courses](#)

English

- English 9, C
- English 9 Honors, C
- English Gifted Seminar

Mathematics

- Algebra 1, C
- Algebra 1 Honors, C (only)
- Algebra 1A
- Algebra 2 Honors, C
- Geometry, C
- Geometry Honors, C

Physical Education

- Movement and Exercise Science 1
- Physical Education, C (only)

Science

- Biology 9 Honors
- General Science, C
- General Science Honors, C

Social Studies

- AP Human Geography
- United States History 2, C
- United States History 2 Honors, C
- United States History Gifted Seminar

[General Interest Courses](#)

World Language

German Courses

- German 1, C

Mandarin Courses

- Mandarin 1, C (only)

Spanish Courses

- Introduction to Spanish
- Spanish 1, C
- Spanish 2, C
- Spanish 2 Honors

Additional World Language courses available online:

- [MyLanguage360.com Language Courses](#), C (only)
- [BSN Language Institute Language Courses](#), C (only)

Music

- Chorus (Note: Activity fee)
- Concert Band
- Concert Band/Chorus

[Specialized Interest Courses](#)

Art

- AP Art History
- Art History, C (only)
- Design Concepts in Art, C (only)
- Digital Design and Studio Art

Business and Information Technology

- Introduction to Business, C
- Interactive Media

Family and Consumer Science

- Personal Growth, C (only)

Health

- Health 1, C

Mathematics

- Computer Programming 1

Technological Studies

Project Lead the Way Courses

- Introduction to Engineering Design

Grade 9 Course Descriptions

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ART

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AP Art History

Art History AP is designed to be the equivalent of an introductory college course in art history. In the course, students will examine major forms of artistic expression from the ancient world to the present and from a variety of cultures. Students will examine and analyze works of art which will include paintings, drawings, architecture, sculptures and other media (printmaking, photography, ceramics, fiber arts, etc.), within their historical context. Students will learn to articulate what they see or experience in a meaningful way.

Art History, C (only)

Students will learn about the architecture, sculpture and paintings of the Egyptians, Greeks, Romans and 20th century artists. In addition to viewing many works of art, students will also be producing/creating different projects based on historical artifacts and will explore modern design and techniques.

Design Concepts in Art, C (only)

Students will develop an understanding of design principles as they explore and practice various methods of visual design and art. Students will have multiple opportunities to solve creative problems while researching their designs, studying historical and contemporary art styles and creating artwork in digital and other media.

Digital Design and Studio Art

This course offers a unique combination of cutting edge digital art and animation along with experiences in a variety of hands-on art projects in a traditional art studio as well as an arts computer lab. Foundational concepts of visual design will be built into the projects. Graphic design, digital painting, and animation projects will be part of the Digital Design component of the course. Studio art projects will incorporate classic materials such as pen and ink, printmaking and sculpture.

BUSINESS AND INFORMATION TECHNOLOGY

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[Course Description Video](#) 

Interactive Media

[Course Description Video](#) 

Web development and design is a collaborative project based curriculum that teaches the foundations of web design and development using Macromedia web tools and Web 2.0 applications. Students will learn about HTML coding and **JavaScript**, the foundations to web design. Using Macromedia Dreamweaver, students will design and build an interactive business web site of interest that will then be integrated into a culminating E-Portfolio website. Incorporating Web 2.0 applications will enable websites to be interactive. Macromedia Fireworks will be used to teach electronic graphic optimization and manipulation. Macromedia Flash will be used to create interactive animations and games to enhance websites. This course is highly recommended to any student interested in careers in the Arts and Humanities or Business and Communications technology.

Introduction to Business, C

Introduction to Business will introduce the student to the exciting and challenging world of business. It will help students become knowledgeable consumers, well-prepared employees, and effective citizens in our economy. It will also give the student an understanding of what it will take to become a business owner. In this course, students research authentic business topics. Students will also create business advertisements and publications. This course is the foundation for other courses such as Personal Finance, Entrepreneurship, Sports & Entertainment Marketing, and Business Law. It is strongly recommended for all ninth graders interested in any business career.

ENGLISH

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English 9, C

This PA Core and College Board Standards aligned course consists of five (5) units. In Unit 1, the thematic concept of coming of age and the elements of voice are introduced and explored in short stories, poetry, essays, and novels. Students will identify diction, syntax, and tone and analyze the way they work together to convey an author's or speaker's voice. In addition, students will incorporate voice effectively in their own writings. In Unit 2 – Defining Style, students will continue to study the coming of age theme as they learn about the unique connection between written texts (short stories) and visual media (film). The students will identify the elements of a short story– setting, exposition, complications (rising action), climax, falling action, resolution (denouement), character, and theme. Furthermore, they will compose a style analysis essay. In Unit 3– Exploring Poetic Voices, students will develop the skills and knowledge necessary to analyze and craft poetry, analyze the function of figurative language and its effects, and write original poems that reflect personal voice, style, and an understanding of the poetic elements. They will also present an oral interpretation of a poem. In Unit 4 – Interpreting Drama through Performance, the “coming of age” concept will be examined in context of the play, *Romeo and Juliet*. Students will interpret and perform a scene from the play after multiple interpretations have been studied. In Unit 5 – Coming of Age amid Controversy, students will explore the significance of setting, conflict, and the growth of characters in relation to the theme of coming of age. They will extrapolate from a short passage the larger themes and literary elements of the novel *To Kill a Mockingbird*. Students will be intentional in the use of the strategies that have helped them become a better reader, writer, speaker, listener, or critical thinker.

English 9 Honors, C

This PA Core and College Board Standards aligned course consists of five (5) units. In Unit 1, the thematic concept of coming of age and the elements of voice are introduced and explored in short stories, poetry, essays, and novels. Students will identify diction, syntax, and tone and analyze the way they work together to convey an author's or speaker's voice. In addition, students will incorporate voice effectively in their own writings. In Unit 2 – Defining Style, students will continue to study the coming of age theme as they learn about the unique connection between written texts (short stories) and visual media (film). The students will identify the elements of a short story– setting, exposition, complications (rising action), climax, falling action, resolution (denouement), character, and theme –. Furthermore, they will compose a style analysis essay. In Unit 3– Exploring Poetic Voices, students will develop the skills and knowledge necessary to analyze and craft poetry, analyze the function of figurative language and its effects, and write original poems that reflect personal voice, style, and an understanding of the poetic elements. They will also present an oral interpretation of a poem. In Unit 4 – Interpreting Drama through Performance, the “coming of age” concept will be examined in context of the play, *Romeo and Juliet*. Students will interpret and perform a scene from the play after multiple interpretations have been studied. In Unit 5 – Coming of Age amid Controversy, students will explore the significance of setting, conflict, and the growth of characters in relation to the theme of coming of age. They will extrapolate from a short passage the larger themes and literary elements of the novel *To Kill a Mockingbird*. Students will be intentional in the use of the strategies that have helped them become a better reader, writer, speaker, listener, or critical thinker.

Honors students must be self-motivated and willing to challenge themselves to engage in the units of study independently, as well as work effectively within a group dynamic. There will be extensive classroom discussion in both whole group and small group formats. Furthermore, there will be extensive reading and writing required outside of the classroom in order to extend the learning. Students will read an additional classic novel and will be expected to produce writing pieces that show a sophisticated and engaging use of writing components such as varied syntax, precise diction, organizational strategies, and figurative language.

English Gifted Seminar (Grade 9 students with GIEP)

The 9th grade gifted seminar program is aligned with both the [Pennsylvania Core Standards](#) and College Board Standards. This course meets gifted students' needs for challenging curriculum in order to achieve each student's highest performance and potential. The core focus of the course is the carefully articulated activities based on the use of multiple learning situations and instructional strategies. [Embedded assessments](#) will provide students with the opportunity to showcase their learning and their progress toward meeting the learning targets. Enriched vocabulary study will build upon Latin and Greek word roots as well as words with roots in mythology. Independent, small group study and open-ended problem solving opportunities based on students' individual gifts and talents will be emphasized. Academic skills and concepts will go beyond grade level expectations, readying students to research real world issues and make connections between literature and the real world. Additionally, students will explore the use of digital media to interact, interpret, create, and share ideas. Note: For students with gifted individualized education plans (GIEPs).

FAMILY AND CONSUMER SCIENCE

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Personal Growth, C (only)

The Personal Growth course will explore how to foster healthy relationships through communication, conflict resolution, and an understanding of human development through different life roles.

HEALTH

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Health 1, C

The course will begin with an introduction about the most important health risks to teens and the preventative strategies to ameliorate these problems. Topics include risk-taking, driving safety, and substance abuse. A unit on systems of the body will be included to deepen the understanding of the other issues and content to be studied. Students will also study the various categories of addictive substances and behaviors. The human sexuality unit is abstinence-based, but does provide instruction in contraception. Primarily, the human sexuality unit will provide a comprehensive background in male and female anatomy, as well as common sexually transmitted infections, and relationship/dating violence. Units in nutrition (basics, calories, fad diets and BMI), and emergency care (non-certification/basics) will also be included.

MATHEMATICS

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Algebra 1, C

Basic to an understanding of the technical innovations in our society, Algebra 1 is the first of the mathematical courses geared toward higher education. Topics of study include variables, function patterns, rational numbers, solving equations, solving inequalities, relations and functions, linear equations and their graphs, systems of equations and inequalities, exponents and exponential functions, polynomials and factoring, quadratic equations and functions, radical expressions and equations, statistics, and rational expressions. Problem solving and real world application are emphasized. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

Algebra 1 Honors, C (only)

Algebra 1 is the first of the mathematical courses geared toward higher education. Topics of study include variables, function patterns, rational numbers, solving equations, solving inequalities, relations and functions, linear equations and their graphs, systems of equations and inequalities, exponents and exponential functions, polynomials and factoring, quadratic equations and functions, radical expressions and equations, statistics, rational expressions, and systems of linear equations/inequalities. Problem solving and real world application are emphasized. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

Algebra 1A, C

This is the first of a two-part series of courses designed to provide students with a solid foundation in algebraic skills. Topics of study include variables, function patterns, rational numbers, solving equations, solving inequalities, relations and functions, linear equations and their graphs, and systems of equations and inequalities. Problem solving and real world application are emphasized.

Algebra 2 Honors, C

Algebra 2 presents the student with a systematic, in-depth study of properties of real numbers, solving equations and inequalities, absolute value, functions and their graphs, linear systems, matrices, quadratic equations and functions, polynomial and polynomial functions, radical functions and radical exponents, exponential and logarithmic functions, quadratic relations and conic sections, sequence and series, probability and statistics, periodic functions and trigonometry, and trigonometric identities and equations. Problem solving and real world application are emphasized.

Computer Programming 1

[Course Description Video](#) 

In this course, students will have hands-on experiences that will expose them to the world of computer science. Students will be exposed to the world of data manipulation using multiple applications. They will learn to use spreadsheets to explore areas of probability, statistics, and data representation and organization of raw data by designing a sample database. They will learn about binary numbers, linear equations, solving for a variable and will be introduced to Logic, Programming in C++, and computer hardware.

Geometry, C

The purpose of this course is to show the student of mathematics how to make the transition from intuitive to demonstrative geometry, and then transfer the procedures learned into effective patterns of thinking. The scope of the course includes patterns and inductive reasoning, measurement, reasoning and proof, parallel and perpendicular lines, congruent triangles, relationships within triangles, quadrilaterals, similarity, right triangles and trigonometry, transformations, coordinate geometry, area, surface area and volume, and circles. Problem solving and real world application are emphasized.

Geometry Honors, C

The purpose of this course is to show the student of mathematics how to make the transition from intuitive to demonstrative geometry, and then transfer the procedures learned into effective patterns of thinking. Students develop effective patterns of thought through the study of logical patterns of thinking. An in depth study of the theories of geometry and their development is presented. A mathematical system using the concepts of two- and three-dimensional geometry is developed. The scope of the course includes patterns and inductive reasoning, measurement, reasoning and proof, parallel and perpendicular lines, congruent triangles, relationships within triangles, quadrilaterals, similarity, right triangles and trigonometry, transformations, coordinate geometry, area, surface area and volume, and circles. Problem solving and real world application are emphasized. Practical problems using algebraic computations are routinely included.

MUSIC

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Chorus

This course is an open choir for any student who wants to sing in a vocal music ensemble. Emphasis is placed on building vocal techniques and music reading skills, and on meeting the special needs of changing voices.

Concert Band

[Course Description Video](#) 

The concert band is comprised entirely of students in grade 9. Students receive small group instruction. The Concert Band focuses on the introduction of advanced musicianship concepts and performs high level music. In addition to performing at all Quakertown Senior High School Band Concerts, the Concert Band also enjoys performance opportunities at band festivals and adjudications around the area.

"Panther Band"

Panther Marching Band is a state-of-the-art marching band. It explores the latest trends in marching band. The Panther Band is an extra-curricular activity for members of the Quakertown Community High School.

"Tradition Band"

The Tradition is an all-encompassing marching band consisting of all 9th-12th grade students enrolled in the concert bands. The Tradition will perform a pre-game show and in the stands for all home varsity football games.

Concert Band and Chorus

[Course Description Video](#) 

The Concert Band and Chorus combination course is for students who wish to participate in both band and choir. Students will follow the course of study requirements for both courses. Since band and chorus meet during the same period, students will alternate attending each rehearsal.

PHYSICAL EDUCATION

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Movement and Exercise Science 1

This course is primarily for 9th grade students, and is structured so that students will understand and apply PA State Standards for Physical Education that focus on physical fitness. Students will gain knowledge and skills pertaining to safety, fitness development, and principles of exercise and training. Students will take part in activities that will enhance cardiovascular fitness, muscular strength and endurance, flexibility, and body composition. Students will work to improve their health-related components of fitness and learn about the concepts of creating and applying a personal fitness program.

Physical Education, C (only)

Students will be using the Fitness for Life textbook to help assist them in understanding the basic concepts and philosophies surrounding the 11 fitness components. It is a structured and progressive course that emphasizes specific fitness components in each chapter and then requires demonstration of those components through specifically designed workouts. Students are required to perform both the written portion of the course and the workouts designed by the teacher. Students will submit the written work through [Blackboard](#) and complete the worksheets or videotape their workouts to demonstrate understanding of the physical skills and technique for submissions. Students will not have the option to work out at their own gym, walk, log hours, etc.

SCIENCE

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Biology 9 Honors

The Biology 9 Honors course is designed for students who are not only college bound but are also passionate about taking [Advanced Placement](#) science courses in anticipation of potential majors/careers in the sciences. It is a rigorous and fast-paced course that incorporates all of the Biology 1 Honors concepts as well as the Ecology content from General Science 9 Honors. The course addresses the following content: basic biological principles, the chemical basis for life, bioenergetics, homeostasis and transport, cell growth and reproduction, genetics, theory of evolution, and ecology. The Biology 9 Honors program will go into great depth and analysis of topics and will include numerous laboratories and individual enrichment activities. Dissections are an integral component of the course. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

General Science 9, C

Students will learn about the following topics in General Science 9:

- [Astronomy](#): history of astronomy, earth/moon/sun system, motions of the sky, light, the sun, stars and the universe as a whole
- [Geology](#): location and navigation, earthquakes and volcanoes, plate tectonics, mineral and rock formation, and the Earth's interior
- [Meteorology](#): the atmosphere, clouds and cloud formation, weather patterns and maps, and severe weather phenomena
- [Ecology](#): Ecosystems and biodiversity, population, cycles of matter and our personal impact on the environment

General Science 9 Honors, C

General Science 9 Honors is designed for highly motivated, science-oriented students. Students will learn about the following topics:

- [Astronomy](#): history of astronomy, earth/moon/sun system, motions of the sky, light, the sun, stars and the universe as a whole
- [Geology](#): location and navigation, earthquakes and volcanoes, plate tectonics, mineral and rock formation, and the Earth's interior
- [Meteorology](#): the atmosphere, clouds and cloud formation, weather patterns and maps, and severe weather phenomena
- [Ecology](#): Ecosystems and biodiversity, population, cycles of matter and our personal impact on the environment

SOCIAL STUDIES

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AP Human Geography

Human Geography Advanced Placement (AP) is designed for students who are college bound and are ready for a college-level course during their first year of high school. This AP course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. This course will be challenging and rigorous, demanding high level reading and writing skills applied to the content of Human Geography. Human Geography AP fulfills the 9th Grade Social Studies requirement.

United States History 2, C

This course is designed for students to analyze the economic, political, and social issues of the United States as it expanded and became an emerging world power from 1860-1929. Also, the students will compare the experience of the United States to other nations as we move toward a more globally interdependent world. The purpose in studying this period is to have students experience the issues people of all nations face as their countries change geographically, politically, economically and culturally. Students will evaluate their role as a citizen in a democratic nation as it faces changing times in the past and present. Major areas of study will include the Civil War, Reconstruction, Westward Expansion, Industrialization, Progressive/Populist Reforms, United States Becoming a World Power, World War I, and the Prosperity of the 1920's. Students will be actively involved studying current events and completing performance tasks that will evaluate and measure student social studies skill and content knowledge under the current local and state standards. The course will involve the students in an active and intense study of the United States and its place in the world.

United States History 2 Honors, C

This course is designed for students to analyze the economic, political, and social issues of the United States as it expanded and became an emerging world power from 1860-1929. The students will compare the experience of the United States to other nations as we moved toward a more globally interdependent world. The purpose in studying this period is to have students experience the issues people of all nations faced as their countries change geographically, politically, economically and culturally. Students will evaluate their role as a citizen in a democratic nation as it faces changing times in the past and present. Major areas of study will include the Civil War, Reconstruction, Westward Expansion, Industrialization, Progressive/Populist Reforms, United States Becoming a World Power, World War I, and the Prosperity of the 1920's. Students will be actively involved studying current events and completing performance tasks that will evaluate and measure student social studies skill and content knowledge under the current local and state standards. The course will involve the students in an active and intense study of the United States and its place in the world. This course requires supplementary reading and extensive writing assignments in narrative, informative, and persuasive modes.

United States History Gifted Seminar

This course is designed for students to analyze the economic, political and social issues of the United States as it expanded and became an emerging world power from 1861-1929. Also, the students will compare the experience of the United States to other nations as we move toward a more globally interdependent world. The purpose in studying this period is to have students experience the issues people of all nations face as their countries change geographically, politically, economically and culturally. Students will evaluate their roles as citizens in a democratic nation as it faces changing times in the past and present. Students will work on individual and collaborative research projects on historical topics of their choice, sharing the results of their research in a seminar format and with wider audiences. In preparation for [Advanced Placement](#) history courses taught in 10th grade and above, this course includes intensive instruction on writing Document-Based Question Essays. Note: For students with gifted individualized education plans (GIEPs).

TECHNOLOGICAL STUDIES

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Project Lead the Way Courses

[Course Description Video](#) 

Project Lead the Way is a college recognized pre-engineering program designed to introduce student to the career of engineering. This program prepares students for the types of engineering classes they will be taking in college. PLTW is also a great opportunity for students to explore the field of engineering. Students planning to major in engineering can benefit by completing the entire program, or just by taking one of the classes. The program is comprised of three foundation courses, a specialization course, and a capstone course. (Note Pre-requisites*)

CORE COURSES:

Principles of Engineering
Introduction to Engineering Design
Digital Electronics

SPECIALIZATION COURSES:

Civil Engineering and Architecture *
Computer Integrated Manufacturing *
Biotechnical Engineering *

CAPSTONE COURSE:

Engineering Design & Development *

Introduction to Engineering Design

This course introduces students to the design process. Students primarily learn how to use the professional design program, Auto Desk Inventor. Auto Desk Inventor is a state of the art 3-D modeling software program that allows students to create professional looking drawings and presentations. Students will use Inventor to complete various open-ended projects. This class also focuses on topics such as introduction to design, sketching and visualization, geometric relationships, assembly modeling, presentation, production, and marketing. Throughout the course, students will work to develop a professional portfolio.

WORLD LANGUAGE

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German Courses

German 1, C

This [proficiency](#)-based course is intended for students who are beginning their study of German. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. The course introduces basic conversational vocabulary, simple grammar, and basic tenses. Students are introduced to the culture and geography of countries where German is the native language.

Mandarin Courses

Mandarin 1, C (only)

This is an online learning class with live teachers located in China. It is an introduction to Chinese as a spoken and written language. The work includes online live class, self-study, live language labs, office hours and assignments, weekly quizzes and exams. Chinese reading and writing is also emphasized in this course.

Spanish Courses

Introduction to Spanish

Counselor recommendation is required to take this course. The course is designed to explore the Spanish Language and to develop beginning speaking skills. Students will be introduced to simple phrases, vocabulary and the culture of Spanish speaking countries. The course will focus on a variety of topics including but not limited to: greetings, personal descriptions, family, food, holidays and celebrations.

Spanish 1, C

This [proficiency](#)-based course is intended for students who are beginning their study of Spanish. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. The course introduces basic conversational vocabulary, simple grammar, and basic tenses. Students are introduced to the culture and geography of countries where Spanish is the native language.

Spanish 2, C

This [proficiency](#)-based course builds upon the skills mastered in Spanish 1. Listening, speaking, reading, and writing skills are expanded through [proficiency](#)-based activities. Complex grammar structures are introduced. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. There is an emphasis on communication in the past tense. Short reading selections will be introduced. Students continue their study of Spanish culture and geography.

Spanish 2 Honors

This [proficiency](#)-based honors course is intended for students who are motivated, organized, and ready to work at a challenging pace. This is the second course in the sequence of preparing students for [Advanced Placement](#) Spanish. This intensive, fast-paced course assumes that students have the basic structures of the Spanish language in place. In this course, students will be expected to sustain brief, spontaneous conversations about familiar topics, write short compositions with increasing control of the present, past, and future tenses, and read short selections for comprehension.

Grades 10, 11, 12 Senior High



Grade 10 [Program of Study](#)

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Student Name _____

[Cyber](#) instruction is available for courses listed with "C." Courses taught only online are listed with "C (only)." Learn more about online courses [here](#). [Advanced Placement \(AP\)](#) is available for courses listed with "AP." Learn more information about [AP](#) courses [here](#).

Required [Core Academic Courses](#)

English

- English Gifted Seminar
- World Literature, C
- World Literature Honors, C

Health

- Health 1, C
- Health 2, C (Those who take Health1 in Grade 9 may select Health2)

Mathematics

- Algebra 1, C
- Algebra 1B
- Algebra 2, C
- Algebra 2 Honors, C
- Algebra 2A
- Geometry, C
- Geometry Honors, C (only)
- Precalculus, C
- Precalculus Honors, C

[General Interest Courses](#)

World Language

German Courses

- German 1, C
- German 2, C
- German 2 Honors
- German 3, C
- German 3 Honors

Mandarin Courses

- Mandarin 1, C (only)
- Mandarin 2, C (only)
- Mandarin 3, C (only)

Spanish Courses

- Introduction to Spanish
- Spanish 1, C
- Spanish 2, C
- Spanish 2 Honors
- Spanish 3, C
- Spanish 3 Honors

Additional World Language courses available online:

- [MyLanguage360.com Language Courses](#), C (only)
- [BSN Language Institute Language Courses](#), C (only)

(Grade 10 [Specialized Interest Courses](#) continued on next page)

Physical Education

- Movement and Exercise Science 1
- Movement and Exercise Science 2
- Physical Education, C (only)

Science

- Biology, C
- Biology Honors, C

Social Studies

- AP United States History
- United States History 3, C
- United States History 3 Honors, C

Music

- AP Music Theory
- Choir (Activity fee)
- Choir/Symphonic Band (Activity fee)
- Pop, Rock and Jazz (Odd-numbered years only)
- Symphonic Band (Activity fee)

Specialized Interest Courses

Art

- Advanced Crafts
- AP Art History
- Art History, C
- Design Concepts in Art, C (only)
- Digital Communications
- Digital Photography
- Dimensional Art and Surface Texture
- Fine Arts 1
- Fine Arts 2
- Introduction to Crafts

Business and Information Technology

- Accounting 1
- Accounting 2 Honors
- Business Law
- Entrepreneurship
- Interactive Media
- International Business
- Introduction to Business, C
- Personal Finance, C
- Sports Entertainment and Tourism Marketing

Dual Enrollment click (INFORMATION) (DESCRIPTION) ([GLOSSARY](#))

- Basic Problems of Philosophy
- Introduction to Psychology
- Introduction to Sociology
- Principles of Economics: Macroeconomics

Family and Consumer Science

- 21st Century Leadership
- Fashion Design 1
- Fashion Design 2
- Foods for a Healthy Lifestyle (Offered even-numbered years only)
- Multicultural Foods (Offered odd-numbered years only)
- Personal Growth, C

Health

- Kinesiology – History, Sociology and Psychology of Sports
- Kinesiology – Sciences of Sport and Management

Language Arts

- Creative Writing, C
- Fundamentals of Composition
- Journalism 1
- Journalism 2
- Public Speaking
- Yearbook

Mathematics

- Computer Programming 1
- Computer Programming 2

Science

- Chemistry 1, C
- Chemistry 1 Honors, C
- Environmental Science, C
- Physics 1, C

Social Studies

- AP Psychology
- Psychology, C ([Cyber](#) offered odd-numbered years only)
- Sociology and Anthropology, C ([Cyber](#) offered even-numbered years only)

Technological Studies

- Project Lead the Way ([Pre-requisites](#) *)
- Biotechnical Engineering *
 - Civil Engineering and Architecture *
 - Computer Integrated Manufacturing *
 - Digital Electronics
 - Engineering Design and Development *
 - Introduction to Engineering Design
 - Principles of Engineering

Other Technological Studies

- TV News/Video Editing, Level 1

Virtual High School

- Virtual High School Program (<http://thevhscollaborative.org>)

Grade 11 [Program of Study](#)

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Student Name

[Cyber](#) instruction is available for courses listed with "C." Courses taught only online are listed with "C (only)." Learn more about online courses [here](#). [Advanced Placement \(AP\)](#) is available for courses listed with "AP." Learn more information about [AP](#) courses [here](#).

Required [Core Academic Courses](#)

English

- American Literature, C
- American Literature Honors, C
- AP English Language and Composition

Health

- Health 1, C
- Health 2, C

Mathematics

- Algebra 2, C
- Algebra 2 Honors
- Algebra 2A, C
- AP Calculus AB
- AP Calculus BC
- AP Probability and Statistics
- Calculus
- Introduction to College Math
- Precalculus, C
- Precalculus Honors, C

Physical Education

- Movement and Exercise Science 1
- Movement and Exercise Science 2
- Movement and Exercise Science 3A
- Movement and Exercise Science 3B
- Physical Education, C (only)

Science

- AP Physics 1
- Chemistry, C
- Chemistry Honors, C
- Introduction to Chemistry
- Introduction to Physics
- Physics, C

Social Studies

- AP European History
- World Cultures, C
- World Cultures Honors, C

[General Interest Courses](#)

World Language

German Courses

- German 1, C
- German 2, C
- German 2 Honors
- German 3, C
- German 3 Honors

Mandarin Courses

- Mandarin 1, C (only)
- Mandarin 2, C (only)
- Mandarin 3, C (only)
- Mandarin 4, C (only)

Spanish Courses

- Spanish 1, C
- Spanish 2, C
- Spanish 2 Honors
- Spanish 3
- Spanish 3 Honors

Additional World Language courses available online:

- [MyLanguage360.com Language Courses](#), C (only)
- [BSN Language Institute Language Courses](#), C (only)

Music

- AP Music Theory
- Choir (Activity fee)
- Choir/Symphonic Band (Activity fee)
- Pop, Rock and Jazz (Odd-numbered years only)
- Symphonic Band (Activity fee)

(Grade 11 [Specialized Interest Courses](#) continued on next page)

Specialized Interest Courses

Art

- Advanced Crafts
- AP Art History
- Art History, C
- Design Concepts in Art, C (only)
- Digital Communications
- Digital Photography
- Dimensional Art and Surface Texture
- Fine Arts 1
- Fine Arts 2
- Fine Arts 3
- Fine Arts 4
- Introduction to Crafts

Business and Information Technology

- Accounting 1
- Accounting 2 Honors
- Business Law
- Entrepreneurship
- Interactive Media
- International Business
- Introduction to Business, C
- Personal Finance, C
- Sports Entertainment and Tourism Marketing

Dual Enrollment click (INFORMATION)(DESCRIPTION)([GLOSSARY](#))

- Basic Problems of Philosophy
- Introduction to Psychology
- Introduction to Sociology
- Principles of Economics: Macroeconomics

Family and Consumer Science

- 21st Century Leadership
- Fashion Design 1
- Fashion Design 2
- Fashion Design 3
- Fashion Design 4
- Foods for a Healthy Lifestyle (Offered even-numbered years only)
- Multicultural Foods (Offered odd-numbered years only)
- Parenting
- Personal Growth, C

Health

- Kinesiology – History, Sociology and Psychology of Sports
- Kinesiology – Sciences of Sport and Management

Language Arts

- Creative Writing, C
- Fundamentals of Composition
- Journalism 1
- Journalism 2
- Journalism 3
- Public Speaking
- Yearbook

Mathematics

- AP Computer Science A – (JAVA) (Optional [Dual Enrollment](#))
- Computer Programming 1
- Computer Programming 2

Science

- Anatomy and Physiology
- AP Biology
- AP Chemistry
- AP Environmental Science
- AP Physics 1
- Environmental Science, C
- Forensics

Social Studies

- AP Psychology
- AP United States History
- AP World History
- Psychology, C ([Cyber](#) offered odd-numbered years only)
- Sociology and Anthropology, C ([Cyber](#) offered even-numbered years only)

Technological Studies

- Project Lead the Way ([Pre-requisites](#) *)
- Biotechnical Engineering *
 - Civil Engineering and Architecture *
 - Computer Integrated Manufacturing *
 - Digital Electronics
 - Engineering Design and Development *
 - Introduction to Engineering Design
 - Principles of Engineering

Other Technological Studies

- TV News/Video Editing, Level 1
- TV News/Video Editing, Level 2

Virtual High School

- Virtual High School Program (<http://thevhscollaborative.org>)

Grade 12 [Program of Study](#)

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Student Name _____

[Cyber](#) instruction is available for courses listed with "C." Courses taught only online are listed with "C (only)." Learn more about online courses [here](#). [Advanced Placement \(AP\)](#) is available for courses listed with "AP." Learn more information about [AP](#) courses [here](#).

Required [Core Academic Courses](#)

English

- AP English Literature and Composition
- British Literature, C (only)
- British Literature Honors, C
- English Literature and Composition
- Senior English

Health

- Health 1, C
- Health 2, C

Mathematics

- Algebra 2, C
- Algebra 2 Honors, C
- Algebra 2A
- AP Calculus AB
- AP Calculus BC
- AP Probability and Statistics
- Calculus
- Introduction to College Math
- Precalculus, C
- Precalculus Honors, C

[General Interest Courses](#)

World Language

German Courses

- German 1, C
- German 2, C
- German 2 Honors
- German 3, C
- German 3 Honors
- German 4 Honors

Mandarin Courses

- Mandarin 1, C
- Mandarin 2, C (only)
- Mandarin 3, C (only)
- Mandarin 4, C (only)

Spanish Courses

- AP Spanish
- Spanish 1, C
- Spanish 2, C
- Spanish 2 Honors
- Spanish 3
- Spanish 3 Honors
- Spanish 4 Honors

(Grade 12 [Specialized Interest Courses](#) continued on next page)

Physical Education

- Movement and Exercise Science 1
- Movement and Exercise Science 2
- Movement and Exercise Science 3A
- Movement and Exercise Science 3B
- Movement and Exercise Science 4 Advanced
- Physical Education, C (only)

Science

- AP Physics 1
- AP Physics 2
- Chemistry, C
- Chemistry Honors, C
- Introduction to Chemistry
- Introduction to Physics
- Physics, C

Social Studies

- AP United States Government and Politics
- Political Science, C
- Political Science Honors, C

Music

- AP Music Theory
- Choir (Activity fee)
- Choir/Symphonic Band (Activity fee)
- Pop, Rock and Jazz (Odd-numbered years only)
- Symphonic Band (Activity fee)

Additional World Language courses available online:

- [MyLanguage360.com Language Courses](#), C (only)
- [BSN Language Institute Language Courses](#), C (only)

Specialized Interest Courses

Art

- Advanced Crafts
- AP Art History
- Art History, C
- Design Concepts in Art, C (only)
- Digital Communications
- Digital Photography
- Dimensional Art and Surface Texture
- Fine Arts 1
- Fine Arts 2
- Fine Arts 3
- Fine Arts 4
- Introduction to Crafts

Business and Information Technology

- Accounting 1
- Accounting 2 Honors
- Business Law
- Entrepreneurship
- Interactive Media
- International Business
- Introduction to Business, C
- Personal Finance, C
- Sports Entertainment and Tourism Marketing

Dual Enrollment click (INFORMATION) (DESCRIPTION) ([GLOSSARY](#))

- Basic Problems of Philosophy
- Introduction to Psychology
- Introduction to Sociology
- Medical Career Pathways Program
- Principles of Economics: Macroeconomics

Family and Consumer Science

- 21st Century Leadership
- Fashion Design 1
- Fashion Design 2
- Fashion Design 3
- Fashion Design 4
- Foods for a Healthy Lifestyle (Offered even-numbered years only)
- Multicultural Foods (Offered odd-numbered years only)
- Parenting
- Personal Growth, C

Field Study

- Field Study

Health

- Kinesiology – History, Sociology and Psychology of Sports
- Kinesiology – Sciences of Sport and Management

Language Arts

- Creative Writing, C
- Fundamentals of Composition
- Journalism 1
- Journalism 2
- Journalism 3
- Journalism 4
- Public Speaking
- Yearbook

Mathematics

- AP Computer Science A – (JAVA) (Optional [Dual Enrollment](#))
- Computer Programming 1
- Computer Programming 2

Science

- Anatomy and Physiology
- AP Biology
- AP Chemistry
- AP Environmental Science
- AP Physics 1
- AP Physics 2
- Environmental Science, C
- Forensics

Social Studies

- AP European History
- AP Psychology
- AP United States History
- AP World History
- Psychology, C ([Cyber](#) offered odd-numbered years only)
- Sociology and Anthropology, C ([Cyber](#) offered even-numbered years only)

Technological Studies

- Project Lead the Way ([Pre-requisites](#) *)
- Biotechnical Engineering *
 - Civil Engineering and Architecture *
 - Computer Integrated Manufacturing *
 - Digital Electronics
 - Engineering Design and Development *
 - Introduction to Engineering Design
 - Principles of Engineering

Other Technological Studies

- TV News/Video Editing, Level 1
- TV News/Video Editing, Level 2
- TV News/Video Editing, Level 3

Virtual High School

- Virtual High School Program (<http://thevhscollaborative.org>)

Grades 10, 11, 12 Course Descriptions

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ART

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Advanced Crafts

This course gives students the opportunity to build upon the techniques and use of media learned in the Introduction to Crafts course. Traditional and contemporary skills will provide enrichment experiences in the crafts area in the following: mixed media collage, ceramics, jewelry making/metalsmithing, fibers and glass. A passing grade in Introduction to Crafts is a prerequisite for admission to this course. Advanced Crafts may be taken multiple times.

AP Art History

Art History AP is designed to be the equivalent of an introductory college course in art history. In the course, students will examine major forms of artistic expression from the ancient world to the present and from a variety of cultures. Students will examine and analyze works of art which will include paintings, drawings, architecture, sculptures and other media (printmaking, photography, ceramics, fiber arts, etc.), within their historical context, Students will learn to articulate what they see or experience in a meaningful way.

Art History, C

Students will learn about the architecture, sculpture and paintings of the Egyptians, Greeks, Romans and 20th century artists. In addition to viewing many works of art, students will also be producing/creating different projects based on historical artifacts and will explore modern design and techniques.

Design Concepts in Art, C (only)

Students will develop an understanding of design principles as they explore and practice various methods of visual design and art. Students will have multiple opportunities to solve creative problems while researching for their designs, studying historical and contemporary art styles and creating artwork in digital and other media.

Digital Communication

In this course students will use the Adobe Design Suite (Illustrator and Photoshop) in accordance with industry standards to create effective designs. This is a project-oriented course that provides students with skills that can be used in enhancing any presentation, whether it is a cover design, poster, electronic presentation, or for personal expression. Students will learn to use the elements and principles of design to visually communicate their ideas.

Digital Photography

Students will study the techniques and processes used to create fine art photographs. Students learn to use professional camera equipment and editing software to create their own original artwork. Using the elements and principles of design, in conjunction with technical skills, students create visually appealing and fundamentally sound photographs. Skills learned in this course also prepare students to create professional quality visuals for future academic or business presentations.

Dimensional Art and Surface Texture

[Course Description Video](#) 

This course covers two distinct components. In Dimensional Design, students will create a variety of two and three-dimensional art projects utilizing the elements and principles of design. Emphasis is placed on innovation through the creation of art in the round, relief sculpture, multi-dimensional and pattern. In Surface Texture, students will create a range of textures using a wide variety of media such as paint, clay, wire, metals and papers.

Fine Arts 1

This course is designed to cover traditional art media and skills in both classic and contemporary methods using various media. Drawing techniques will include observation from life including experiences in contour and blind-contour line, value shading in various media, and proportion and composing by free-hand as well as grid techniques. Painting projects will use water-based media and focus on blending as well as more textural or experimental techniques that can be used for contrast.

Fine Arts 2, 3 and 4

Students seek to further improve and refine their skills in the traditional drawing and painting media introduced in Fine Arts 1. Students will continue to explore and develop their creativity and utilization of the elements and principles of design by creating original works of art. As students progress to the higher levels of the course, more advanced drawing and painting techniques will be utilized. A passing grade in Fine Arts 1 is a [prerequisite](#) for admission into this course.

Introduction to Crafts

Introduction to Crafts will introduce students to traditional craft making techniques as well as incorporate contemporary craft methods to generate both two and three-dimensional projects. Students will learn a variety of techniques in the following areas: mixed media/collage, ceramics, jewelry making/metalsmithing, fibers and glass.

BUSINESS AND INFORMATION TECHNOLOGY

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[Course Description Video](#) 

Accounting 1

Accounting is a means of recording and reporting financial data. You don't have to be a math whiz, but being a structured and organized person helps. As an Accounting 1 student you will journey through the accounting process for a service business organized as a proprietorship. Accounting software will also be used.

Accounting 2 Honors

Unlike the procedural approach of Accounting 1, this in-depth course will be taught from a conceptual approach. Students will develop an understanding of how accounting is used for operating decisions in business and will refer to Apple Computers' annual report to apply the principles learned. Students will learn to understand the economic and legal environment of business, gather and summarize data, and prepare meaningful reports designed to meet the information needs of decision makers. This unique course combines financial and managerial accounting principles. Accounting 1 is not required, but it may be helpful to have that background knowledge for some students.

Business Law

In this course, students will discover how laws and government regulations influence daily activities. Business Law looks at the court system and how civil and criminal law affects us. The focus will be on laws related to employment, credit, banking, bankruptcy, sales contracts, apartment rental, home ownership, automobile purchase, and more. Students will learn how laws can work to a person's advantage and what the penalties are for not observing laws. Students will research interesting cases, then, through small group discussions and role-playing, identify the proper way to proceed when faced with legal situations. A mock trial is a highlight of the course.

Entrepreneurship

Businesses with fewer than 100 employees create over 85 percent of the new jobs in the United States. This course will help students to develop the 21st century skills needed for entrepreneurial activities. Students will learn the characteristics of entrepreneurs and the people who work for them, the benefits and challenges of an entrepreneurial organization, how to create a business plan, how to develop financial documents, and how to succeed and demonstrate strong work ethics. Students will engage in a business project that uses the community as a resource. Since both large and small employers desire entrepreneurial skills, students will be able to transfer what is learned to a career in any type or size of organization.

Interactive Media

Web development and design is a collaborative project-based curriculum that teaches the foundations of web design and development using Macromedia web tools and Web 2.0 applications. Students will learn about HTML coding and **JavaScript**, the foundations of web design. Using Macromedia Dreamweaver, students will design and build an interactive business web site of interest that will then be integrated into a culminating E-Portfolio website. Incorporating Web 2.0 applications will enable websites to be interactive. Macromedia Fireworks will be used to teach electronic graphic optimization and manipulation. Macromedia Flash will be used to create interactive animations and games to enhance websites. This course is highly recommended to any student interested in careers in the Arts and Humanities or Business and Communications technology.

International Business

This course will provide the foundation for studying international business and conducting business in the global economy. Students will develop the appreciation, knowledge, skills, and abilities needed to live and work in a global marketplace and will be provided with a wealth of learning experiences that will prepare them for entry-level international business and marketing occupations. Students will learn about the impact of technology on global business and will be provided with opportunities to analyze alternative aspects of international business. Students will be engage in real-world applications, projects, technology, ethics, and cross-curricular links.

Introduction to Business, C

Introduction to Business will introduce the student to the exciting and challenging world of business. It will help students become knowledgeable consumers, well-prepared employees, and effective citizens in our economy. It will also give students an understanding of what it will take to become business owners. In this course, students research real world business topics. Students will create business advertisements and publications. This course is the foundation for other courses such as Personal Finance, Entrepreneurship, Sports & Entertainment Marketing, and Business Law. It is strongly recommended for all ninth graders interested in any business career.

Personal Finance, C

In this course, students will learn how to best manage personal finances. Activities include the online Stock Market Game, searching for apartments to rent and houses to buy, learning how to complete tax forms, balance a checkbook, lower car insurance payments, and use credit cards wisely.

Sports Entertainment and Hospitality Marketing

This course will take you on a step-by-step journey through the exciting world of sports and entertainment marketing and management. You will learn about the key functions of marketing and how those functions are applied to the sports and entertainment industry. This course will also cover the basics of marketing and management within the hospitality and tourism industries. It will introduce students to the global environment in which business is conducted within the hospitality and tourism service industry. The major functions of business are addressed with a focus placed on timely issues, diversity, and business challenges within the hospitality and tourism industry. Guest speakers, case studies, and on-line activities will broaden the classroom learning experience.

DUAL ENROLLMENT

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[Basic Problems of Philosophy](#)

This course is offered through: [Bucks County Community College](#).

Investigation of enduring problems in the area of semantics, epistemology, religion, and ethical theory through presentation of philosophers influential in developing the major historic and contemporary positions. Nature of philosophical analysis and judgment emphasized. Source: <http://www.bucks.edu/catalog/courses/social/philosophy/>

Introduction to Psychology

This course is offered through: [Bucks County Community College](http://www.bucks.edu).

Introduction to Psychology is the scientific study of the psychological factors which influence the behavior of individual organisms, both animal and human. Source: <http://www.bucks.edu/catalog/courses/social/psychology/>

Introduction to Sociology

This course is offered through: [Bucks County Community College](http://www.bucks.edu).

This course is an introduction to the basic concepts in the field of sociology, with emphasis upon the application of these concepts to the understanding of American institutions: politics, economics, religion, education, marriage, and the family.

Source: <http://www.bucks.edu/catalog/courses/social/sociology/>

Medical Career Pathways Program (no course link available)

This course is offered through: [Bucks County Community College](http://www.bucks.edu).

This program allows students to explore careers in medicine. Through a partnership with St. Luke's Hospital in Quakertown, Bucks County Community College, and Quakertown Senior High School, students take college credit two days per week at QCHS, attend medical seminars at St. Luke's Hospital one day per week, and participate in job shadow experiences at St. Luke's one day per week. Students may participate in their senior year and must provide their own transportation. Students who satisfactorily complete this program by mastering identified competencies will earn one elective credit.

Principles of Economics: Macroeconomics

This course is offered through: [Bucks County Community College](http://www.bucks.edu).

An introduction to the basic principles of economics, with emphasis upon macroeconomic theory and analysis. Among topics considered are the scope and nature of economics, ideology and structure of the American economy, national income and employment theory, business fluctuations, money and banking, fiscal and monetary policies, and economic growth. Source: <http://www.bucks.edu/catalog/courses/social/economics/>

ENGLISH

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American Literature, C

This PA Core and College Board standards-aligned course consists of several units. In Unit 1 – The American Dream, students explore and examine preconceived notions regarding The American Dream. They identify and synthesize the historical and literary foundations that exist about The American Dream. Synthesizing a variety of sources, students establish and communicate their own American Dream and create a clear and insightful essay. In Unit 2 – American Forums — Marketplace of Ideas, students identify the main components and role of argumentation, opinion and editorials by analyzing how writers use logic, evidence and rhetoric to advance their opinions. Students learn to analyze and apply satirical techniques by writing their own pieces that refute the positions of others. They will also recognize the symbols and references that editorial cartoonists use. In Unit 3 – The Power of Persuasion, students define and apply the appeals and devices of rhetoric, analyze, create, and present persuasive speeches. They read, study, interpret, and analyze a variety of cultural, historical, social, and political speeches and quotes for persuasive techniques. After reading the dramatic work, *The Crucible* by Arthur Miller, students develop a literary analysis essay. In Unit 5 - The Pursuit of Happiness, students will consider the American Dream from the viewpoint of what it means to be happy and to pursue happiness. They explore this idea by analyzing and evaluate the structural and stylistic features of texts, most significantly *Into the Wild* by John Krakauer. With this knowledge, they compose a personal essay that employs the stylistic techniques studied along the way. Throughout each unit, students engage in a sequence of activities that focus on the intended learning targets. The scaffolded instructional strategies and multiple learning opportunities advance students toward developing a repertoire of reading and writing strategies, practicing effective speaking skills, becoming active and effective listeners, and viewing and producing media critically.

American Literature Honors, C

This PA Core and College Board standards-aligned course consists of several units. In Unit 1 – The American Dream, students explore and examine preconceived notions regarding The American Dream. They identify and synthesize the historical and literary foundations that exist about The American Dream. Synthesizing a variety of sources, students establish and communicate their own American Dream and create a clear and insightful essay. In Unit 2 – American Forums — The Marketplace of Ideas, students identify the main components and role of argumentation, opinion and editorials by analyzing how writers use logic, evidence and rhetoric to advance their opinions. Students learn to analyze and apply satirical techniques by writing their own pieces that refute the positions of others. They will also recognize the symbols and references that editorial cartoonists use. In Unit 3 – The Power of Persuasion, students define and apply the appeals and devices of rhetoric, analyze, create, and present persuasive speeches. They read, study, interpret, and analyze a variety of cultural, historical, social, and political speeches and quotes for persuasive techniques. After reading the dramatic work *The Crucible* by Arthur Miller, students develop a literary analysis essay. In Unit 5 - The Pursuit of Happiness, students will consider the American Dream from the viewpoint of what it means to be happy and to pursue happiness. They explore this idea by analyzing and evaluate the structural and stylistic features of texts, most significantly *Into the Wild* by John Krakauer. With this knowledge, they compose a personal essay that employs the stylistic techniques studied along the way. Throughout each unit, students engage in a sequence of activities that focus on the intended learning targets. The scaffolded instructional strategies and multiple learning opportunities advance students toward developing a repertoire of reading and writing strategies, practicing effective speaking skills, becoming active and effective listeners, and viewing and producing media critically.

Honors students must be self-motivated and willing to challenge themselves to engage in the units of study independently, as well as work effectively within a group dynamic. There will be extensive classroom discussion in both whole group and small group formats. Furthermore, there will be extensive reading and writing required outside of the classroom in order to extend the learning. Students will read additional classic novels and will be expected to produce writing pieces that show a sophisticated and engaging use of writing components such as varied syntax, precise diction, organizational strategies, and figurative language.”

AP English Language and Composition

An [AP](#) course in English Language and Composition engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts. Both their writing and their reading should make students aware of the interactions among a writer’s purposes, audience expectations, and subjects. The [AP](#) Language and Composition course assumes that students already understand and use standard English grammar. The intense concentration on language use in this course should enhance their ability to use grammatical conventions both appropriately and with sophistication as well as to develop stylistic maturity in their prose. In [AP](#) English Language and Composition, students learn to understand and analyze complex styles of writing by reading works from a variety of authors. They’ll explore the richness of language, including syntax, imitation, word choice, and tone. They’ll also learn about their own composition style and process, starting with exploration, planning, and writing, and continuing through editing, peer review, rewriting, polishing, and applying what they learn to a breadth of academic, personal, and professional contexts. [AP](#) English Language and Composition prepares students for the [AP](#) Exam. The content aligns to the scope and sequence specified by the College Board.

AP English Literature and Composition

[Advanced Placement](#) English Literature and Composition will give students a learning experience equivalent to a typical undergraduate introduction to literature class. This course provides a broad overview of British Literature with a study of the works of selected English writers from the Old English Period to the Modern Period – along with a few American and World Authors. We will focus on literature through historical, social, and personal levels. Our literary analysis will look through the lenses of style and structure, rhetorical strategies, diction, figurative language, imagery, selection of detail, language, and syntax. In addition to writing a variety of essays focusing on the critical analysis of literature, students will keep a writing log over the course of the year to document their progress and to engage themselves in thinking about their writing. It is expected that students will take the [AP](#) English exam in May.

British Literature Full Year, C (only)

British Literature explores texts of various genres written by authors of the United Kingdom. By examining the history of the English language through a chronological review of literature, students make connections to our modern culture, noting the evolution of speech and expression. Students cover pieces from Old English through Modern English including Chaucer, Shakespeare, Carroll, Blake, Coleridge, Tennyson and Wolfe.

British Literature Honors Full Year, C

British Literature Honors analyzes works of significant literary and intellectual movements in British history from Anglo-Saxon times to the present. As an honors course, British Literature focuses on helping students acquire the skills necessary to become independent, critical readers, writers, speakers and thinkers. Students will develop their own interpretations of texts and will argue those interpretations in multiple formats through high-level analysis with relevant support from the text. Students will also practice creative writing, during which they will have the opportunity to apply and emulate the literary techniques they have experienced through reading. The course seeks to cultivate an appreciation for the value of literature by asking students to consider the universal questions and topics with which great works grapple. The course aligns with the [Pennsylvania Core](#), and expectations will reflect college-level performance.

Creative Writing, C

This course is for students who like to write and want to hone their craft. Students will experiment with different genres including nonfiction, fiction, poetry, and drama. By reading, analyzing, and discussing the works of published authors, students will learn to apply effective writing techniques to enhance their original works. All writing assignments will reflect the process of writing from free-writing and brainstorming to editing and publishing. In addition, students will be expected to confer with the teacher and to participate in class discussion and writer response groups. Students will also need to read independently, to maintain a writer's notebook and portfolio, and to reflect on their writing.

English Gifted Seminar (Grade 10 students with GIEP)

The tenth grade gifted seminar program is aligned with both the [Pennsylvania Core](#) Standards and College Board Standards. The core focus of the course is the sequencing of activities based on the use of multiple learning situations and instructional strategies, all [anchored](#) by the standards. At the start of the course, students will engage in discussion of culture surrounding their summer reading novels then move into canonical and modern texts to practice writing, speaking, and reading skills. Following that, students will participate in a monologue unit expressing two voices of an identity. Students will also select novels on given themes related to culture and develop passion projects related to their areas of giftedness, both of which connect to college-readiness. [Embedded assessments](#) within the selected units provide students with the opportunity to showcase their learning and their progress toward meeting the learning targets. The culmination of the year has students develop a project for the district and presenting their idea to administration; the experience is based on Project-Based Learning, with an authentic audience and real-world application of the learning targets for a foreseeable outcome. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

English Literature and Composition

English Literature and Composition, is the study of language, literature, composition and oral communication. The course integrates literature study across a wide variety of genres with writing for a variety of purposes and audiences. Students use literary interpretation, analysis, comparisons, and evaluation to read and respond to representative works of historical or cultural significance in classic and contemporary literature balanced with a variety of non-fiction texts. Through reading and response, students will explore universal themes in literature and the impact of reading and writing to learn. Writing will include a focus on necessary college and career readiness skills through the argumentative, informational, and narrative modes.

Fundamentals of Composition

Students who are college and/or career bound need excellent writing skills. In this course, they will learn the strategies needed to write effectively in any situation. This course offers students the chance to develop writing skills for any audience, with a sense of purpose, and with voice. Students will write attention-grabbing introductions, thought-provoking conclusions, and choose the correct organizational structure for the content of any writing task. Students will learn valuable research techniques and skills. Through researching, students will develop reading skills by using a wide variety of strategies to help understand even the most difficult of texts. Students will self-select and investigate a topic and compose a research paper. Through individual and peer revision, students will learn the disadvantages of passive voice, the wonders of parallel structure, and the power of precise word choice.

Journalism 1, 2, 3 and 4

In addition to examining the roles and responsibilities of the press, students in Journalism I will practice writing the kinds of articles commonly found in major newspapers: news, features, editorials and sports. Principles of newspaper design will also be explored and put into practice. Students will brainstorm story ideas, interview sources, research and compose original and publishable stories for the school newspaper, Paw Prints. In Journalism 2, 3, and 4 students will refine the reporting, writing, and designing skills developed in Journalism 1. They will also complete research projects involving the history, evolution and future of journalism.

Public Speaking

In this presentation-based course, students will explore this topic and the fundamental principles of effective communication. Students will develop, research, organize, practice and present a variety of speeches, both formal and informal. While students participate in class, group, and peer discussion, they will constantly hone their oral communication skills. Through on-going peer and teacher feedback and self-evaluation, students will develop their writing, speaking, and listening skills. Units for this course include everyday speaking, informational speeches, and the art of rhetoric - the argumentative speech.

Senior English

This course, an option for 12th grade students, is a carefully scaffolded and purposefully sequenced course of instruction in the reading, writing, vocabulary, and grammar necessary to prepare for 21st century college and post-secondary success. It is aligned with the PA Common Core State Standards and College Board Standards for Reading, Writing, Speaking, Listening and Media Literacy. Students will hone their skills in collaboration, effective communication in speech and writing, comprehension and analysis of challenging texts, and the critical intelligence to view the ever-present media in their lives. They will learn through the reading of poetry, informational and narrative texts and novels, and the writing of essays and other forms of communication, including the creation of media. A back-mapping instructional design ensures that skills and content necessary for [embedded assessments](#) are included in planning for success. Students will read deeply, write with clarity and focus, and develop critical-thinking skills needed to emerge as successful readers, writers and thinkers.

World Literature, C

The course consists of several units. In Unit 1 – Voices of Modern Culture, students will examine the variety of voices other writers and speakers use depending on audience, on purpose, and forms. Students will apply analytical, critical, creative, and reflective strategies to published texts, peer generated texts, and their own texts. Students will develop speaking and listening skills for effective communication and presentation of ideas. In Unit 2 – Cultural Conversations, students will learn to recognize how we define ourselves as individuals through our interactions with external cultural forces. They will understand and apply the basic elements of argument and identify and understand significant cultural conversations within a variety of media sources. Additionally, students will learn how to apply the appropriate conventions and elements of a synthesis essay. In Unit 3 – Community, students will analyze character relationships and motivation in a literary work while applying academic writing skills to a literary analysis. They will research and make connections between one's culture and the culture of another time and place. Unit 4 – Justice, examines the varying perspectives on justice across cultures and over time. By recognizing effective elements of persuasion, students will create a persuasive piece. Students will also rehearse and present a dramatic interpretation. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

World Literature Honors, C

The course consists of several units. In Unit 1 – Voices of Modern Culture, students will examine the variety of voices other writers and speakers use depending on audience, purpose, and forms. Students will apply analytical, critical, creative, and reflective strategies to published texts, peer generated texts, and their own texts. Students will develop speaking and listening skills for effective communication and presentation of ideas. In Unit 2 – Cultural Conversations, students will learn to recognize how we define ourselves as individuals through our interactions with external cultural forces. They will understand and apply the basic elements of argument and identify and understand significant cultural conversations within a variety of media sources. Additionally, students will learn how to apply the appropriate conventions and elements of a synthesis essay. In Unit 3 – Community, students will analyze character relationships and motivation in a literary work while applying academic writing skills to a literary analysis. They will research and make connections between one’s culture and the culture of another time and place. Unit 4 – Justice, examines the varying perspectives on justice across cultures and over time. By recognizing effective elements of persuasion, students will create a persuasive piece. Students will also rehearse and present a dramatic interpretation.

Honors students must be self-motivated and willing to challenge themselves to engage in the units of study independently, as well as work effectively within a group dynamic. There will be extensive classroom discussion in both whole group and small group formats. Furthermore, there will be extensive reading and writing required outside of the classroom in order to extend the learning. Students will read additional independent texts and will be expected to produce writing pieces that show a sophisticated and engaging use of writing components such as varied syntax, precise diction, organizational strategies, and figurative language. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

Yearbook

[Course Description Video](#) 

In this course, students will study the theories behind gathering information and selecting appropriate material to be incorporated into the yearbook. Students study yearbook production including design, layout, and copywriting. Through the actual production of the yearbook, students take responsibility for their respective sections under the direction of an editor-in-chief. The course is open only to members of the yearbook staff. Prospective journalism students must secure the permission of the instructor. (Students are expected to work beyond the school day.)

FAMILY AND CONSUMER SCIENCE

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(Students will be expected to pay for all materials used which exceed minimum project requirements.)

21st Century Leadership

What are you planning to do after you graduate from high school? It's not too early to start thinking about it. Whether it's going to college or getting a job and moving out on your own, there are skills we all need to know to be successful as adults. 21st Century Leadership focuses on identifying your personal values and feelings about yourself, setting and achieving goals, stress management, and using strategies for making good decisions in both your personal and professional life. Learning how to listen and communicate more effectively to foster healthy relationships will also be addressed. How much money can I spend on an apartment, how can I afford a new car, and how can I make my money work for me are some of the topics we will cover in money management.

Fashion Design 1

This course is designed for a student with limited sewing experience. Students, with guidance from the instructor, will select their own sewing projects and are expected to purchase all materials for construction of their garments.

Fashion Design 2

This course is designed for the student who desires to improve his/her sewing ability by learning advanced techniques and skills. Emphasis is placed on advanced textile study, commercial pattern alteration and advanced sewing techniques. Students, with guidance from the instructor, will select their own sewing projects and are expected to purchase all materials for construction of garments.

Fashion Design 3

In this course, students will learn the basics of hand and machine tailoring for various garments. Emphasis is placed on tailoring stitches, tailoring, and lining a jacket with a matching companion piece. Students, with guidance from the instructor, will select their own sewing projects and are expected to purchase all materials for construction of garments.

Fashion Design 4

Students (with guidance from instructor) will create a sample book of advanced sewing techniques, and continue to create advanced projects to increase their skills and design techniques. Students are expected to purchase all project materials.

Foods For a Healthy Lifestyle

This course is designed for the active, health conscious student. Students will learn the many facets of foods and nutrition to make delicious and healthy meals. The course includes the study of low calorie, low fat and high energy foods for the active individual.

Multicultural Foods

In this course, students will explore the culture, language, geography, resources, and history of countries around the world as they pertain to the impact on the cuisine of the country and its influence on the United States and the way we eat. Students will have the opportunity to use equipment, try techniques and taste the foods essential to the cooking of these countries. Countries and regions include: China, France, Italy, Mexico, Spain, India, New Orleans, and Southwestern cuisine.

Parenting

This course is designed to help develop the young adult for a possible future role as a parent. Students will analyze their personal philosophies and beliefs on issues that will affect their lives and their future children such as gender roles, dating parameters, discipline, family planning, parental responsibilities and sexuality. The physical development issues which will affect their children such as genetics, prenatal factors, fertility, pregnancy and childbirth will be updated with current medical information.

Personal Growth, C

The Personal Growth course will explore how to foster healthy relationships through better communication, conflict resolution, and an understanding of human development through your different life roles.

FIELD STUDY

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Field Study

A student who has successfully met all district graduation requirements may complete an application for Field Study during his/her senior year. This non-credit bearing experience allows the student to pursue activities including but not limited to: community or local college/university courses; career exploration; job shadowing; co-op; internship; or community service. A completed application/proposal must be submitted to the guidance office during program planning and will require administrative approval. Each student will be required to keep an electronic portfolio of his/her experience.

HEALTH AND PHYSICAL EDUCATION

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Health 1, C

Health 1 curriculum is designed to meet the health needs of teenagers. The course will begin with an introduction about the most important health risks to teens and the preventative strategies to ameliorate these problems. Topics include risk-taking, driving safety, and substance abuse. A unit on systems of the body will be included to deepen the understanding of the other issues and content to be studied. Students will also study the various categories of addictive substances and behaviors. The human sexuality unit is abstinence-based, but does provide instruction in contraception. Primarily, the human sexuality unit will provide a comprehensive background in male and female anatomy, as well as common sexually transmitted infections, and relationship/dating violence. Units in nutrition (basics, calories, fad diets and BMI), and emergency care (non-certification/basics) will also be included.

Health 2, C

The emphasis of Health 2 is to prepare students for the health issues they will face not only as teenagers, but throughout life. The course introduction will emphasize that the majority of adult and chronic disease are preventable. In conjunction with national health education standards, the use of community resources will be promoted to obtain health care and information to maintain good health throughout their adult life. The course will involve a deeper study of issues such as addictions, and human sexuality (prenatal care, childbirth, parenting, positive and negative aspects in relationships). A unit in mental health will be limited to the study of the most common mental health issues and disorders such as anxiety and mood disorders. Students will have the opportunity to receive instruction in basic CPR and the use of an AED (Automatic External Deliberator) on a non-certification basis.

Kinesiology – History, Sociology and Psychology of Sport

Students in this course will examine an historical overview of sport and human movement. They will also explore the sociological and psychological aspects of sport and leisure activity. Contemporary issues will be a focus, as well as the impact of sport upon the individual and society.

Kinesiology – Sciences of Sport and Movement

[Course Description Video](#) 

The primary sciences involved in human movement will be introduced in this course. The students will explore the areas of exercise physiology, biomechanics and motor learning. Applications to careers in kinesiology, health, healthcare and the fitness industries will be examined.

Physical Education

Movement and Exercise Science (MES) 1

This course is primarily for 9th grade students, and is structured so that students will understand and apply PA State Standards for Physical Education that focus on physical fitness. Students will gain knowledge and skills pertaining to safety, fitness development, and principles of exercise and training. Students will take part in activities that will enhance cardiovascular fitness, muscular strength and endurance, flexibility, and body composition. Students will work to improve their health-related components of fitness and learn about the concepts of creating and applying a personal fitness program. This full year course will meet every other day.

Movement and Exercise Science (MES) 2

This course is primarily for 10th graders, and expands upon the information and techniques learned in MES I. Students will use health- and skill-related fitness components in a variety of physical activities. The emphasis of this course is to provide students with the techniques and knowledge necessary to develop a personalized fitness program. Scientific principles, fitness concepts, and physiological principles to maintain personal health will be established. This full semester course will meet every day.

Movement and Exercise Science (MES) 3A

This course is intended for 11th graders, and expands upon the information taught in prior MES courses. With the knowledge and skills learned in MES I and II, students will integrate movement skills and practice strategies with a variety of physical activities. Motor skill development will take place in group and individual physical activities. A specific focus on strategies of movement as well as physical activities that promote health and fitness will be emphasized throughout this course. This full semester course will meet every day.

Movement and Exercise Science (MES) 3B

This course is intended for 11th graders, and expands upon the information taught in prior MES courses. With the knowledge and skills learned in MES 1 and 2, students will apply that learning to the concepts of regular participation. Students will be engaged in activities that emphasize personal challenges, interests, and strategies that advance physical fitness. Responses of the body systems to physical activity will be evaluated through individual activity preference and self-improvement. This full semester course will meet every day.

Movement and Exercise Science (MES) 4: Advanced

This course is intended for 12th graders or for those students who have met all of their physical education requirements. This course focuses on advanced motor skill developments and includes a higher-level application and knowledge base of the PA State Standards for Physical Education. Instruction and [assessment](#) will include content such as movement skills/concepts, motor skill development concepts, practice strategies, game strategies, and application of scientific fitness principles. This full semester course will meet every day.

Physical Education, C (only)

Students will be using the Fitness for Life textbook to help assist them in understanding the basic concepts and philosophies surrounding the 11 fitness components. It is a structured and progressive course that emphasizes specific fitness components in each chapter and then requires demonstration of those components through specifically designed workouts. Students are required to perform both the written portion of the course and the workouts designed by the teacher. They will submit the written work through [Blackboard](#) and complete the worksheets or videotape their workouts to demonstrate understanding of the physical skills and techniques for submission. Students will not have the option to work out at their own gym, walk, log hours, etc.

MATHEMATICS

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Algebra 1, C

Basic to an understanding of the technical innovations in our society, Algebra 1 is the first of the mathematical courses geared toward higher education. Topics of study include variables, function patterns, rational numbers, solving equations, solving inequalities, relations and functions, linear equations and their graphs, systems of equations and inequalities, exponents and exponential functions, polynomials and factoring, quadratic equations and functions, radical expressions and equations, statistics, and rational expressions. Problem solving and real world application are emphasized. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

Algebra 1B

Algebra 1B is the second of a two-part series of courses designed to provide students with a solid foundation in algebraic skills. Topics of study include an overview of Algebra IA skills, as well as an introduction to exponents and exponential functions, polynomials and factoring, quadratic equations and functions, radical expressions and equations, statistics, and rational expressions. Problem solving and real world application are emphasized. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

Algebra 2, C

Building on basic Algebra 1 principles, the student in this course studies properties of real numbers, solving equations and inequalities, absolute value, functions and their graphs, linear systems, matrices, quadratic equations and functions, polynomial and polynomial functions, radical functions and radical exponents, exponential and logarithmic functions, rational functions, quadratic relations and conic sections, sequence and series, probability and statistics, periodic functions and trigonometry, and trigonometric identities and equations. Problem solving and real world application are emphasized.

Algebra 2 Honors, C

Algebra 2 presents the student with a systematic, in-depth study of properties of real numbers, solving equations and inequalities, absolute value, functions and their graphs, linear systems, matrices, quadratic equations and functions, polynomial and polynomial functions, radical functions and radical exponents, exponential and logarithmic functions, rational functions, quadratic relations and conic sections, sequence and series, probability and statistics, periodic functions and trigonometry, and trigonometric identities and equations. Problem solving and real world application are emphasized.

Algebra 2A

Building on the basic principles of Algebra 1, the student explores topics such as properties of real numbers, solving equations and inequalities, absolute value, functions and their graphs, linear systems, matrices, quadratic equations and functions, polynomial and polynomial functions, radical functions and radical exponents, exponential and logarithmic functions, rational functions, quadratic relations and conic sections, sequence and series, probability and statistics, periodic functions and trigonometry, and trigonometric identities and equations. Problem solving and real world application are included as appropriate.

AP Calculus AB

This course includes the study of the derivative with applications (e.g., related rates, curve sketching, maximum/minimum, and applications of the differential). The integral (definite and indefinite) is theoretically tied to applications (e.g., work problems, area under the curve, volumes of revolution, and some simple differential equations). The integral and derivative are developed around the use of the polynomial, logarithmic, exponential, trigonometric, and other transcendental functions. Students successfully completing this course are expected to take the [AP](#) Exam.

AP Calculus BC

Calculus AB is a [pre-requisite](#) for Calculus BC. Emphasis will be placed on a deep understanding of the concepts of calculus (limits, derivatives, integrals, and series) and how they relate to one another. Students will be regularly asked to interpret problems and situations and to communicate their process and solutions both orally and in writing.

AP Computer Science: JAVA (Optional [Dual Enrollment-LCCC*](#))

Java is a structured computer language used frequently for technical problem solving via computer. The language works across platforms (Mac OS, Windows, and Linux) making it more dynamic than any other language in use today. The course follows the syllabus prepared by the College Board for [Advanced Placement](#) Computer Science A. Students successfully completing this course qualify to take the [AP](#) exam.

*[Dual Enrollment-LCCC](#): students can choose to earn college [credits](#) through Lehigh Carbon Community College for taking this course at the senior high school. College [credits](#) must be purchased by the student if opting to earn college [credit](#). More information is available through your counselor.

AP Probability and Statistics

This course will extend the study of statistics begun through the four course integrated mathematics curriculum. Students will study descriptive and inferential statistics. Students use and apply normal distributions, linear regression analysis techniques, and hypothesis testing. They will solve difference equations and investigate samples to find confidence levels and errors. A course requirement is to conduct a full data study demonstrating applications of concepts learned. Students successfully completing this course are expected to take the [AP](#) exam.

Calculus

This course will extend the study of statistics begun through the four course integrated mathematics curriculum. Students will study descriptive and inferential statistics. Students use and apply normal distributions, linear regression analysis techniques, and hypothesis testing. They will solve difference equations and investigate samples to find confidence levels and errors. A course requirement is to conduct a full data study demonstrating applications of concepts learned. Students successfully completing this course are expected to take the [AP](#) exam.

Computer Programming 1

[Course Description Video](#) 

In this course, students will have hands-on experiences that will expose them to the world of computer science. Students will be exposed to the world of data manipulation using multiple applications. They will learn to use spreadsheets to explore areas of probability, statistics, and data representation and organization of raw data by designing a sample database. They will learn about binary numbers, linear equations, solving for a variable and will be introduced to Logic, Programming in C++, and computer hardware.

Computer Programming 2

[Course Description Video](#) 

This course is a follow up to Computer Programming 1. This course will highlight areas of data structure using C++ with emphasis on parameters, pass by reference, vectors, matrix, and graphics. C++ is a structured computer language used frequently for technical program writing. It is also used as a vehicle for the study of problem solving via computer. Students will learn to design simulations that will help explain many of today's phenomena, such as random number generators, data security, and computer based games. This course is best for students who wish to pursue a career in computer science, mathematics, or engineering at the college level. Students can obtain a free copy of a compiler that can be used to design source codes at home. This course will be taught in a Mac lab using Mac based application as a delivery tool. Students participating in this course may earn college [credit](#) if they sign up for [Dual Enrollment](#) opportunities. Students may also opt to take this course for honors [credit](#) provided they complete an extension project.

Geometry, C

The purpose of this course is to show the student of mathematics how to make the transition from intuitive to demonstrative geometry, and then transfer the procedures learned into effective patterns of thinking. The scope of the course includes patterns and inductive reasoning, measurement, reasoning and proof, parallel and perpendicular lines, congruent triangles, relationships within triangles, quadrilaterals, similarity, right triangles and trigonometry, transformations, coordinate geometry, area, surface area and volume, and circles. Problem solving and real world application are emphasized.

Geometry Honors, C (only)

The purpose of this course is to show the student of mathematics how to make the transition from intuitive to demonstrative geometry, and then transfer the procedures learned into effective patterns of thinking. Students develop effective patterns of thought through the study of logical patterns of thinking. An in depth study of the theories of geometry and their development is presented. A mathematical system using the concepts of two- and three-dimensional geometry is developed. The scope of the course includes patterns and inductive reasoning, measurement, reasoning and proof, parallel and perpendicular lines, congruent triangles, relationships within triangles, quadrilaterals, similarity, right triangles and trigonometry, transformations, coordinate geometry, area, surface area and volume, and circles. Problem solving and real world application are emphasized. Practical problems using algebraic computations are routinely included.

Introduction to College Math

This course is designed to assist non-math majors in developing and applying the fundamental concepts of algebra, geometry, and statistics. Topics covered in this course parallel those taught in a college-level introductory course. Emphasis will be placed on both problem solving skills and applications of concepts.

Precalculus, C

This course is designed to help prepare students for calculus in both their conceptual understanding of the key math topics listed below and the technical skills needed regarding each topic. An appreciation for the power and utility of mathematics within the context of the real world is emphasized. The following topics will be discussed throughout the course: functions and graphs; polynomial, power, and rational functions; exponential, logistic, and logarithmic functions; trigonometric functions; analytic trigonometry; systems and matrices; and analytic geometry in two and three dimensions.

Precalculus Honors, C

This course is designed to help prepare students for Calculus in both their conceptual understanding of the key math topics listed below and the technical skills needed regarding each topic. An appreciation for the power and utility of mathematics within the context of the real world is emphasized. The following topics will be discussed throughout the course: functions and graphs; polynomial, power, and rational functions; exponential, logistic, and logarithmic functions; trigonometric functions; analytic trigonometry; applications of trigonometry; systems and matrices; analytic geometry in two and three dimensions; discrete mathematics; and an introduction to Calculus including limits, derivatives, and integrals.

MUSIC

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[AP Music Theory](#)

This course is designed to develop the student's ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. The achievement of this goal may be best promoted by integrated approaches to the student's development of: aural skills through listening, sight-singing skills through performance exercises, written skills through written exercises, compositional skills through creative exercises, and analytical skills through analytical exercises. The course will seek to instill mastery of the rudiments and terminology of music, including notation, intervals, scales and keys, chords, metric organization, and rhythmic patterns.

Choir

The choir is comprised of students in grades 10-12 who wish to excel in vocal music. Emphasis is placed on developing each student's singing voice to the highest level possible, and on performing choral music at the highest level possible. There is a continued emphasis on developing music reading skills. The select choir sings a wide variety of choral music, including the great works of the major composers from the past five centuries.

In addition to its many local concerts, the Select Choir will participate in away events that may include assemblies for other schools, choral festivals, adjudication festivals, and spring choir tours.

Pop, Rock and Jazz

[Course Description Video](#) 

This course examines the development of American popular music, from the sounds of Dixieland, through bebop and modern jazz, to today's popular fusions of traditional jazz with rock, hip hop, and other emerging styles. The course will examine music through each decade of the 20th century, including a study of the blues, Dixieland, the big band era, rock and roll, hard rock, metal, folk, country, rap and hip hop.

Symphonic Band

[Course Description Video](#) 

The Symphonic Band is comprised of students in grades 10-12 and meets every day as a full ensemble, year-round, during the school day. Students also receive small group instruction on a rotating basis six times each marking period. The Symphonic Band focuses on developing advanced levels of musicianship and performs Grade 4-6 (out of 6) level literature. In addition to performing at all Quakertown High School Band Concerts, the Symphonic Band also performs at band festivals and adjudications around the area, giving students the opportunity to perform for varied audiences.

Symphonic Band and Choir

The Symphonic Band and Select Choir combination course is for students in grades 10-12 who wish to excel in both band and choir. Students will be recommended for this course based on their level of [proficiency](#) both as an instrumentalist and as a singer. In addition, band/choir combination students must display a consistently high level of dedication and commitment to the demands of participating in two advanced performing ensembles. Students will follow the course of study requirements for both courses. Since band and choir meet during the same period, students will attend rehearsals for both courses by "splitting" the period.

SCIENCE

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Anatomy and Physiology

This course is designed for the science-oriented student who has successfully completed Biology 1. The course of study focuses on biochemistry, histology, and body systems such as the skeletal, muscular, cardiovascular, endocrine, digestive, and nervous systems. This course is designed for college-bound students with an interest in science, allied health fields, medicine, or a general interest in the biology of the human body. The dissection of the cat and various lab activities are required, integral components of the course.

[AP Biology](#)

[AP Biology](#) is designed to cover all of the topics included in the [AP Biology](#) curriculum. By comprehensively including topics such as biochemistry, energy flow, cytology, genetics, evolution, biotechnology, and ecology, students should have the conceptual framework, factual knowledge, and analytical skills necessary to deal with the rapidly changing science of biology. Heavy emphasis will be placed on inquiry lab work and independent study skills. Dissections are an integral component of this course.

[AP Chemistry](#)

This course is designed for students to study all the topics included in the [AP Chemistry](#) curriculum. The key concepts and related content that define the course and exam are organized around underlying principles called the big ideas, which encompass the core scientific principles, theories and processes governing chemical systems: Chemical elements are fundamental building blocks of matter, chemical and physical properties of materials are due to the structure of particles and the forces between them, changes in matter involve the rearrangement of atoms and/or transfer of electrons, rates of chemical reactions are determined by molecular collisions, the laws of thermodynamics describe the role of energy and explain and predict the direction of changes in matter, any bond or intermolecular attraction can be formed and broken. Emphasis is placed on strategic thinking in solving problems. Students enrolling in this course will be encouraged to take the [AP Chemistry](#) examination in May. Extra time outside of the current schedule will be needed to complete the guided inquiry lab activities required by the College Board (this would depend on the structure of the schedule at the high school). It is highly recommended by the College Board that this is a second level chemistry course that be taken after successful completion of a Chemistry course. It is recommended that Physics and Algebra 2 have been taken before or concurrently with this course. A graphing or scientific calculator is required for this course.

[AP Environmental Science](#)

Environmental Science [AP](#) is designed to be the equivalent of a college level course. The goal is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, identify and analyze environmental problems, evaluate the risks associated with environmental problems, and examine alternative solutions for resolving and/or preventing them. Areas of study include: renewable and non-renewable resources, water and air pollution, climate changes and ozone loss, population ecology, food and soil resources, and sustaining biodiversity. The students will perform laboratory experiments and are expected to formally report findings.

AP Physics 1 ([Prerequisite](#): Algebra 2)

AP Physics 1 is equivalent to a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum), work, energy, and power, and mechanical waves and sound. It also introduces electric circuits. Students should have completed geometry and be concurrently taking Algebra 2 or an equivalent course.

AP Physics 2 ([Prerequisite](#): AP Physics 1)

AP Physics 2 is equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics, thermodynamics, electricity and magnetism, optics, and atomic and nuclear physics. Students should be concurrently taking Pre-Calculus or an equivalent course.

Biology, C

Biology is the science of living things. The course includes the following topics: biological principles, the chemical basis of life, bioenergetics, homeostasis and transport, cell growth and reproduction, genetics, evolution and ecology. Laboratory sessions are scheduled to reinforce the course content. Students master the proper techniques and skills required to operate the microscope and various laboratory equipment. These laboratory activities will be performed both individually and in groups. Students will be involved with dissection activities. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

Biology Honors, C

The Honors Biology program is designed for those college bound students with a special aptitude and interest in the life sciences. It follows the same basic format as the College Preparatory Biology course which includes: biological principles, the chemical basis of life, bioenergetics, homeostasis and transport, cell growth and reproduction, genetics, evolution and ecology. The Honors program has an accelerated pace, greater depth and analysis of topics, as well as numerous laboratories and individual enrichment activities. Dissections are an integral component of the course. [PDE](#) requires through Chapter 4 that students are proficient on the Keystone Exam for this course as a graduation requirement.

Chemistry, C

This course is primarily designed as an introductory chemistry course for the college bound student who does not intend to major in science or engineering, although it will include some of the concepts in chemistry necessary for fields of study requiring a limited background in chemistry. Topics of study include science as inquiry, properties of matter, matter and energy, structure of matter and reactions. Students will be expected to develop skills in problem analysis and solution. Laboratory activities will be a component of the course and are designed to create hands-on structured and inquiry-based opportunities to practice proper lab techniques, while utilizing report writing, mathematics calculations, and analysis of data to express results for problem analysis.

Chemistry Honors, C

This course will provide a rigorous theoretical background in chemistry; consequently, a student's commitment to hard work and careful study is essential. Topics such as the science as inquiry, properties of matter, matter and energy, structure of matter and reactions will be studied. Emphasis is placed on connecting concepts and analytical thinking and problem solving. Laboratory activities will be a major component of the course and are designed to create hands-on structured and inquiry-based opportunities to practice proper lab techniques, while utilizing report writing, mathematics calculations, and analysis of data to express results for problem analysis.

Environmental Science

This course is designed for environmental science study by those students who have already achieved a basic understanding of biological science. Areas of study include but are not limited to the following: ecosystems and interactions, environmental problems and sustainability, population ecology, endangered species, terrestrial biodiversity, food and soil resources, and environmental history. Emphasis will be on building upon previous knowledge of the life sciences. Laboratory activities will be performed by both individuals and groups.

Forensics

This course will provide an introduction to criminalistics and forensics, including topics such as: fingerprints, DNA analysis, fiber and hair analysis, ballistics, document and handwriting analysis, drugs and toxicology, analysis of human (including skeletal) remains, and evidence from blood and other bodily fluids. The course will include case studies and examination of reproduced evidence from actual crimes as well as laboratory analysis of evidence gathered at simulated crime scenes. Students must have successfully completed Biology and Chemistry, or must be taking Chemistry concurrently, to be eligible to participate in this class.

Introduction to Chemistry/Introduction to Physics

In this course each core area will be addressed for 90 days and will focus on a gaining a conceptual understanding of topics and how they impact real life and industry. Topics will include matter and energy, atoms and elements, nomenclature, chemical reactions, describing motion, Newtonian mechanics, circuits and properties of waves.

Physics, C

This course is a Pennsylvania Chapter 4 required course. In this course matter and their interactions are presented through topics such as kinematics, dynamics, energy, momentum, wave motion, and sound. The students will be expected to develop skills in problem analysis and solution. The students will perform various experiments and will be expected to develop skills in laboratory performance and reporting procedures.

SOCIAL STUDIES

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[AP](#) European History

The goals of the [AP](#) European History course are to gain an understanding of the principal themes in modern European history, to develop an ability to analyze historical evidence, to develop an appreciation of European culture, and to prepare for the [AP](#) exam. The focus of study will be the major events and trends in Europe from approximately 1450 (the Renaissance) to the present and will include not only the political history of Europe but also cultural, intellectual, economic, and social history. As this course is equivalent to a college-level course, there will be extensive reading and writing assignments. Students are expected to take the [AP](#) Exam.

[AP](#) Psychology

The [AP](#) Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.

[AP](#) United States Government and Politics

The goal of this course is to increase understanding of the American Political System, its framework, traditions and values and have each student be successful with the [AP](#) exam. This course is concerned with the nature of the American political system, its development over the past two hundred years, and how it works today. Students will examine in detail the principal processes and institutions through which the political system functions, as well as some of the public policies which these institutions establish and how these policies are implemented. Extensive reading and writing activities will be required to augment and enrich the formidable course of study. Emphasis will be placed on developing strong cognitive thinking skills and independent responsibility for factual information. The focus will be to encourage students to approach American Government and Politics as a college level course. Students are expected to take the [AP](#) Exam.

AP United States History

The [Advanced Placement](#) Program in United States History is designed to provide students with the analytic skill and factual knowledge necessary to deal critically with the problems and materials in United States history. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Students will learn to assess historical materials - their relevance to a given interpretive problem, their reliability, and their importance - and to weigh the evidence and interpretations presented in historical scholarship. This [AP](#) history course will develop the skills necessary to arrive at conclusions on the basis of an informed judgment, and to present reasons and evidence clearly and persuasively in essay format. The content of the course will cover the periods from Pre-European America to the present. Students are expected to take the [AP](#) Exam.

AP World History

The goal of the [AP](#) World History course is to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies. This understanding is achieved through a combination of selective factual knowledge and appropriate analytical skills. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies. It emphasizes relevant factual knowledge used in conjunction with leading interpretive issues and types of historical evidence. The course builds on an understanding of cultural, institutional and technological precedents that, along with geography set the human stage. The course will have as its chronological frame the period from approximately 8000 B.C. to the present. The focus will be to encourage students to approach World History as a college level course. Students are expected to take the [AP](#) exam for college [credit](#).

Political Science, C

The goal of political science is to foster in students the knowledge and participatory skills necessary to competently engage in the political and economic life of the United States. To this end, the course examines the Constitution and formal political institutions to better understand the way in which the American government is organized and the role and purposes which it serves. The mechanisms and opportunities for citizen engagement in the political process are investigated through the study of linkage institution such as political parties, interest groups and the media. In order to ensure the preservation and improvement of the United States as well as to safeguard the fundamental liberty of all its citizens, the balancing act between rights and responsibilities is an essential area of focus in this course. The major units of study of this course are Types of Government and Economic Systems, Forming the U.S. Government and Constitution, Federalism and State Governments, Civil Liberties and the Judicial Branch, Nominations and Elections, Public Opinion and Pressure Groups, the Legislative Branch, the Executive Branch, and Public Policy.

Political Science Honors, C

The goal of political science is to foster in students the knowledge and participatory skills necessary to competently engage in the political and economic life of the United States. To this end, the course examines the Constitution and formal political institutions to better understand the way in which the American government is organized and the role and purposes which it serves. The mechanisms and opportunities for citizen engagement in the political process are investigated through the study of linkage institution such as political parties, interest groups and the media. In order to ensure the preservation and improvement of the United States as well as to safeguard the fundamental liberty of all its citizens, the balancing act between rights and responsibilities is an essential area of focus in this course. The major units of study of this course are Types of Government and Economic Systems, Forming the U.S. Government and Constitution, Federalism and State Governments, Civil Liberties and the Judicial Branch, Nominations and Elections, Public Opinion and Pressure Groups, the Legislative Branch, the Executive Branch, and Public Policy. Students in the honors class will be expected to become active participants and will be called on to do supplementary reading and more extensive writing assignments in narrative, informative, and persuasive modes.

Psychology, C

This course is designed to explore the major methods and ideas of modern psychology including the study of various mental illnesses, treatments, therapies and the works of noted psychologists.

Sociology and Anthropology, C

This course is designed to examine the subtle changes that occur daily in the world around us and to discuss different sociological issues of our time. The topics of study include an examination of social norms, structures, and types of groups in modern society. With this knowledge, students analyze family dynamics, divorce rates, types of stratification systems and social mobility in the United States. Students will analyze how these social topics affect common deviant behaviors and crimes prevalent in today's society. Students will develop skills in sociological research methods and help them learn how to use sociology to read and analyze situations through writing assignments, collaboration and in-depth discussions. Anthropology focuses on the study of the origin and development of human culture. Students will gain an awareness of anthropology through identification of concepts including cultural relations, language, relationships, and religion, and define the concept of culture, identifying features that distinguish human language from animal communication and explaining why it is important to include nonverbal behavior in the study of culture. With this knowledge, students will discuss formal and informal means by which individuals learn their culture and how factors influence behavior, which focuses on how culture, personality, and human psychology intersect. The concepts of race, gender, religion, and ethnicity are analyzed. Students will define and identify sources of aggression and conflict and mechanisms for preventing, reducing, and resolving conflict.

United States History 3, C

This course will encourage students to become informed, educated citizens in order to prepare them to fully and productively participate in society. Citizen participation in society in part relies on an educated understanding of our past and how that has impacted our society, our government, and our international relationships. The major areas of study will include the Great Depression, World War II, the Cold War, as well as the foreign and domestic policies of the United States from the 1950s through the new millennium. Students will be actively involved studying current events and completing performance tasks that will evaluate and measure student social studies skills and content knowledge as defined by state standards. The course will involve the students in an active and intense study of the United States and its place in the world.

United States History 3 Honors, C

This course will encourage students to become informed, educated citizens in order to prepare them to fully and productively participate in society. Citizen participation in society in part relies on an educated understanding of our past and how that has impacted our society, our government, and our international relationships. The major areas of study will include the Great Depression, World War II, the Cold War, as well as the foreign and domestic policies of the United States from the 1950s through the new millennium. Students will be actively involved studying current events and completing performance tasks that will evaluate and measure student social studies skill and content knowledge as defined by state standards. The course will involve the students in an active and intense study of the United States and its place in the world. Students will be to do supplementary reading and extensive writing assignments in narrative, informative, and persuasive modes.

World Cultures, C

World Cultures is a required, junior-level, social studies course designed to provide student the opportunity to acquire the knowledge and skills necessary to better understand contemporary world issues and embrace their own role, opportunities, and responsibilities in American society. The major areas of study will include North America, Africa, South Asia, the Middle East, the former Soviet Union, East Asia, and Europe. The course focuses on every individual and societal goal of providing the basic needs of food, water, and shelter as well as secondary needs of health care, education, transportation, and recreation. For a broader perspective, students will also investigate the vast array of worldviews and organizational structures present in world societies, with special attention paid to the motivations and belief structures of political, religious, and business systems. With this knowledge, students will be able, as members of a global community, to obtain a greater understanding, appreciation, and settled tolerance of beliefs, cultures, and values different from their own.

World Cultures Honors, C

World Cultures is a required, junior-level, social studies course designed to provide students the opportunity to acquire the knowledge and skills necessary to better understand contemporary world issues and embrace their own role, opportunities, and responsibilities in American society. The major areas of study will include North America, Africa, South Asia, the Middle East, the former Soviet Union, East Asia, and Europe. The course focuses on every individual and societal goal of providing the basic needs of food, water, and shelter as well as secondary needs of health perspective, students will also investigate the vast array of worldviews and organizational structures present in world societies, with special attention paid to the motivations and belief structures of political, religious, and business systems. With this knowledge, students will be able, as members of a global community, to obtain a greater understanding, appreciation, and settled tolerance of beliefs, cultures, and values different from their own. Students in the honors class will be expected to become active participants and will be required to do supplementary reading and more extensive writing assignments in narrative, informative, and persuasive modes.

TECHNOLOGICAL STUDIES

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[Course Description Video](#) 

Project Lead the Way Courses

Project Lead the Way is a college recognized pre-engineering program designed to introduce student to the career of engineering. This program prepares students for the types of engineering classes they will be taking in college. PLTW is also a great opportunity for students to explore the field of engineering and decide if they would enjoy a career in the field of engineering. Students planning to major in engineering can benefit by completing the entire program, or just by taking one of the classes. The program is comprised of three foundation courses, a specialization course, and a capstone course. These courses will be full-year courses. (Note Pre-requisites *)

CORE COURSES:

Principles of Engineering
Introduction to Engineering Design
Digital Electronics

SPECIALIZATION COURSES:

Civil Engineering and Architecture *
Computer Integrated Manufacturing *
Biotechnical Engineering *

CAPSTONE COURSE:

Engineering Design & Development *

The above order is the recommended sequence of Project Lead the Way courses; however, students can take the first four courses in any order.

Principles of Engineering

This course provides an overview of engineering and engineering technology. Students will develop problem-solving skills by tackling real-world engineering problems. This course provides a hands-on approach to science, math, and technology. Through theory and practical hands-on experience, students will become familiar with the multifaceted career of engineering. This course will explore the following topics: Design Process, Fluid Power, Electronics, Robotics, Mechanical Systems, Materials Testing, Thermodynamics, and Engineering for Quality and Reliability.

Introduction to Engineering Design

This is one of the core courses of the PLTW program. Students in this class will be introduced to 3-D modeling design using the professional software design program, Auto Desk Inventor. This course will use hands-on problem solving activities as well as research and will emphasize communication and presentation skills. Students will work on such projects as: Puzzle Cube, Custom Organizer, Isometric Shape, Kids Toy, and an Individual Final Project.

Digital Electronics

This course will introduce students to the concept of digital electronics and applied logic. Students will learn how to design, build, test, and troubleshoot electronic circuits and projects. Through theory and practical hands-on experience, students will explore the following topics: Fundamentals of Electronics, Logic Gates, Programmable Logic Devices, Boolean Algebra, and Microprocessors. Students will have the opportunity to design and build their own electronic projects.

Civil Engineering and Architecture

This course provides an overview of the fields of Civil Engineering and Architecture, while emphasizing the inter-relational and dependence of both fields on each other. Students use state of the art software to solve real world problems and communicate solutions to hands-on projects and activities. This course covers topics such as: The Roles of Civil Engineers and Architects, Project Planning, Site Planning, Building Design, and Project Documentation and Presentation. (Intro level course recommended as a [pre-requisite](#)).

Computer Integrated Manufacturing

This course is one of the specialization courses of the Project Lead the Way program. Through a hands-on approach, students will learn how computers and robotics are used in industry. Students will have an opportunity to design projects that will be created by using a computerized milling machine. They will also learn about robotics by working with small programmable robots, as well as working with a robotic arm that interacts with a CNC milling machine to create a programmable robot cell. This course will allow students to experience how computers, robots, and people, work together to produce the products that we use in our daily lives. ([Pre-requisite](#): Intro Course)

Engineering Design and Development

This course is a research and design class that is the capstone course for the Project Lead the Way program. Students will work in teams to create a solution to a problem that they identified. They will then learn how to use the engineering design process to solve the problem by researching the problem, conducting surveys, and brainstorming solutions. Once a solution is selected, they will create a full set of working drawings and a fully functional prototype of their invention. This course gives students an opportunity to apply what they learned in all of the other PLTW courses to solve a "real world" problem. ([Pre-requisite](#): Intro Course)

Biotechnical Engineering

The major focus of the Biotechnical Engineering (BE) course is to expose students to the diverse fields of biotechnology including biomedical engineering, bio-molecular genetics, bioprocess engineering, and agricultural and environmental engineering. Lessons engage students in engineering design problems that can be accomplished in a high school setting related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, human interface, bioprocesses, forensics, and bio-ethics. The BE course is a high school course that is more suited to be taken by 11th or 12th grade students as part of the Project Lead The Way sequence of courses or as an [elective](#). Students should have experience in biology, chemistry, mathematics, and technology education. It is a project as well as problem-based curriculum similar to all Project Lead the Way courses. Students in this course will apply biological and engineering concepts to design materials and processes that directly measure, repair, improve, and extend living systems. Biotechnical Engineering is one of the specialty courses in the Project Lead the Way pre-engineering curriculum, which applies and concurrently develops secondary level knowledge and skills in biology, physics, technology, and mathematics.

Other Technical Studies Courses

TV News/Video Editing 1

Course Description Video 

This course introduces students to the highly engaging art and science of creating a TV show that will broadcast to the worldwide web, to the QCHS cafeteria TV screens and to the Quakertown region via Comcast and Verizon cable channels. Students will become part of the QCSD Panther Production Company. They will learn all the elements that go into a production. These include: Video, photography, writing, broadcast anchor work and editing. Resulting work will be very public. Therefore, students will be encouraged to develop and follow through with creative ideas. Students will take turns going to after school and evening events at all district school buildings to gather video and photo footage.

TV News/Video Editing 2

Course Description Video 

This course is a fast-paced, highly rigorous application of concepts and applications taught in Level 1. These include storytelling, storyboarding, script-writing, video, photography, broadcast anchor work and editing. Students in Level 2 will become sophisticated producers of television communications for the QCSD public. Resulting work will air on Comcast and Verizon educational access channels. Students who take the course must be prepared to spend time outside the school day gathering video story footage at all district school buildings. The course will encourage collaborative, creative, critical thinking and decision making skills. It will prepare students for college and professional video production.

TV News/Video Editing 3

Creative, ambitious students who have successfully applied what they have learned in Levels 1 and 2 will be able to take the skills to the next level in TV News/Video Editing-Level 3. Through a variety of projects, they will create video stories for QCSD and Quakertown Borough. They will collaborate with QCHS teachers to produce course content tutorials. They will further develop skills for storytelling, storyboarding, script-writing, video, photography, broadcast anchor work and editing. In addition, they will develop leadership skills as the producers of new programming. Resulting work will air on Comcast and Verizon educational access channels as well as the website. Students who take the course must commit to filming at least one after school or evening event per marking period to gather video story footage at district school buildings and in the community. The course will demand collaborative, creative, critical thinking and decision making skills. It is designed to prepare students for college and professional video production.

WORLD LANGUAGE

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German Courses

German 1, C

This [proficiency](#)-based course is intended for students who are beginning their study of German. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. The course introduces basic conversational vocabulary, simple grammar, and basic tenses. Students are introduced to the culture and geography of countries where German is the native language.

German 2

This [proficiency](#)-based course builds upon the skills mastered in German 1. Listening, speaking, reading, and writing skills are expanded through [proficiency](#)-based activities. In this course, more complex grammar structures are introduced. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. There is an emphasis on communication in the past tense. Short reading selections will be introduced. Students continue their study of German culture and geography.

German 2 Honors

This [proficiency](#)-based honors course is intended for students who are motivated, organized, and ready to work at a challenging pace. This intensive, fast-paced course assumes that students have the basic structures of the German language in place. In this course, students continue to sustain brief, spontaneous conversations about familiar topics, write short compositions with increasing control of the present and past tenses, and read short selections for comprehension.

German 3

This [proficiency](#)-based course builds upon skills mastered in German 2. Listening, speaking, reading, and writing skills are expanded through [proficiency](#)-based activities. More complex grammar structures are introduced. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. Students read short selected texts. Students continue to study German culture and geography. The majority of the class is conducted in German.

German 3 Honors

This [proficiency](#)-based honors course is intended for students who are motivated, organized, and ready to work at a challenging pace. This intensive, fast-paced course assumes that students have mastered intermediate-level structures of the German language. In this course, students continue to sustain spontaneous conversations about familiar and cultural topic, write compositions with increasing control of the present, past, and future tenses, and read authentic texts for comprehension and significance. The course is conducted primarily in German.

German 4 Honors

This [proficiency](#)-based honors course is intended for students who are motivated, organized, and ready to work at a challenging pace. The focus of this course is to increase the students' [proficiency](#) in listening, speaking, reading, and writing in the target language. Students study specialized, contemporary vocabulary and cultural units, which include history, art, music, and current issues. Audio and video recordings, films, and literary excerpts will be used to expand the students' vocabulary and improve their mastery of grammar. The course is conducted in German.

Mandarin Courses

Mandarin 1, C (only)

This is an online class with live teachers located in China as an introduction to the spoken and written Chinese language. The work includes online live class, self-study, live language labs, office hours and assignments, weekly quizzes and exams. Chinese reading and writing is also emphasized in this course.

Mandarin 2, C (only)

This online course develops students' communication abilities in Chinese and develops an understanding of the cultural context in which the language is used. Students learn to communicate through activities in speaking, listening, reading and writing; they will review and learn vocabulary, grammar, sentence patterns and characters; and they will study Chinese cultures and societies. Online class activities are highly interactive and focus on speaking and listening. Reading about texts and Chinese cultures is also emphasized, as are informal writing (to develop fluency) and brief compositions (to develop accuracy). Class is scheduled five lessons per week, one lesson per day. Students are expected to meet their teachers to have online live class and do self-study the rest of the week, including a weekly quiz. The on-line learning platform helps students maximize their learning and practice experience.

Mandarin 3, C (only)

Students go beyond their basic foundation of Chinese language and culture and expand on history, vocabulary, sentence structure, and grammar. Class time is dedicated to interactive activities allowing students to enhance skills in speaking, listening, reading and writing. Through multimedia teaching materials and activities, students are challenged to build upon the information they have learned in the Chinese culture and develop a deeper understanding of the Chinese people. Class is scheduled five lessons per week, one lesson per day. Students meet their teachers twice a week for on-line live class. Students are expected to do self-study the rest of the week, including speaking activities, audio assignments, weekly quizzes, etc. The on-line learning platform helps students maximize their learning and practice experience.

Mandarin 4, C (only)

Students move beyond a basic foundation of the Chinese language and culture and begin the study of advanced Chinese literature. Class time is dedicated to interactive activities and literary translations allowing students to practice their learned speaking, listening, reading and writing skills. Through multimedia teaching materials and activities, students are introduced to many aspects of Chinese culture including intense study of literature, art, calligraphy, and Chinese philosophy. Class is scheduled five lessons per week, one lesson per day. Students meet their teachers twice a week for on-line live class. Students are expected to do self-study the rest of the week, including practice activities, culture activities, weekly quizzes, etc. The on-line learning platform helps students maximize their learning and practice experience.

Spanish Courses

[AP Spanish Language](#)

The [Advanced Placement](#) Spanish Language Program is for those students who have chosen to enhance their [proficiency](#) in Spanish. The academic rigor of this course in content and difficulty is based on a third year college Spanish Language course. Students will be expected to develop the following:

- a strong command of vocabulary and structure;
- an understanding of spoken Spanish in various conversational situations and verbal narratives;
- the ability to read, comprehend, and summarize fiction and non-technical writings;
- the ability to fluently and accurately express ideas orally and in writing.

Introduction to Spanish

This course is designed to explore the Spanish language and to develop beginning speaking skills. Students will be introduced to simple phrases, vocabulary and the culture of Spanish speaking countries. The course will focus on a variety of topics including but not limited to: greetings, personal descriptions, family, food, holidays and celebrations.

Spanish 1, C

This [proficiency](#)-based course is intended for students who are beginning their study of Spanish. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. The course introduces basic conversational vocabulary, simple grammar, and basic tenses. Students are introduced to the culture and geography of countries where Spanish is the native language.

Spanish 2, C

This [proficiency](#)-based course builds upon the skills mastered in Spanish 1. Listening, speaking, reading, and writing skills are expanded through [proficiency](#)-based activities. In this course, more complex grammar structures are introduced. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. There is an emphasis on communication in the past tense. Short reading selections will be introduced. Students continue their study of Spanish culture and geography.

Spanish 2 Honors, C

This [proficiency](#)-based honors course is intended for students who are motivated, organized, and ready to work at a challenging pace. This is the second course in the sequence of preparing students for [Advanced Placement](#) Spanish. This intensive, fast-paced course assumes that students have the basic structures of the Spanish language in place. In this course, students continue to sustain brief, spontaneous conversations about familiar topics, write short compositions with increasing control of the present and past tenses, and read short selections for comprehension.

Spanish 3

This [proficiency](#)-based course builds upon skills mastered in Spanish 2. Listening, speaking, reading, and writing skills are expanded through [proficiency](#)-based activities. More complex grammar structures are introduced. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. Students read short selected texts. Students continue to study Spanish culture and geography. The majority of the class is conducted in Spanish.

Spanish 3 Honors

This [proficiency](#)-based honors course is intended for students who are motivated, organized, and ready to work at a challenging pace. This is the third course in the sequence of preparing students for [Advanced Placement](#) Spanish. This intensive, fast-paced course assumes that students have mastered intermediate-level structures of the Spanish language. In this course, students continue to sustain spontaneous conversations about familiar and cultural topics, write compositions with increasing control of the present, past, and future tenses, and read authentic texts for comprehension and significance. The course is conducted primarily in Spanish

Spanish 4 Honors

This course builds upon skills mastered in Spanish 3. Listening, speaking, reading, and writing skills are expanded through [proficiency](#)-based activities. More complex grammar structures are introduced. This course requires active participation from each student as he/she develops written and oral communication skills and reading comprehension skills. Students read authentic literary texts and continue their study of Spanish culture and geography. The course is conducted primarily in Spanish.

SPECIAL PROGRAMS AND SERVICES

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Adapted Physical Education

This course is provided for students who cannot participate in regularly scheduled physical education classes. Students who encounter posture, physical fitness, weight, perceptual motor, or other physical complications of either a temporary or permanent nature may be scheduled into an adapted program for the semester or for the duration of activities to meet the student's needs. This can be designed in cooperation with the student's physician and the physical education staff.

AP Opportunities

Students may earn college [credit](#) and/or advanced standing at many colleges by taking and earning a high score on [Advanced Placement](#) Tests offered through the guidance office in May of each school year. Examples of [Advanced Placement](#) Tests frequently taken include English Composition, English Literature, European History, US History, World History, Calculus, Physics, Music Theory, US Government and Politics, Psychology, Computer Science and Foreign Language. While a fee is charged for each test, the fee is usually a fraction of the per [credit](#) cost of courses at the college level.

English Language Learners

The ELL Program is designed to instruct and assist any student whose first language is something other than English. Students are assessed for their speaking, listening, reading, and writing skills in English and then placed in the corresponding ELL level through consultation with the ELL staff. Each course satisfies an English requirement for graduation.

Life Skills Support Program

Students in the Life Skills Support Program are involved in a curriculum designed to meet each individual student's unique needs. Focus is placed on functional academic skills necessary for work and community living. Special emphasis is placed on career exploration and development of job skills. Community-based instruction promotes generalization of skills from practice to application including those needed for banking, shopping, and leisure pursuits. The primary goal of the program is to prepare each student to work and live as independently as possible in the community. Inclusion in high school courses and activities is encouraged and based on individual student interest and need.

Multiple Disabilities Support Program

Students enrolled in the Multi-Disabilities Support Program participate in a curriculum intended to foster development of skills and behaviors that are considered essential to increasing independence. Emphasis is placed on acquisition of functional skills in the environmental domains of school/community, domestic living, recreation/leisure, and vocational. The goal of the program is to increase independent functioning through the development of each student's cognitive, social, motor, and behavioral skills. Participation in high school activities is encouraged and students are active participants in the school community.

Programs for Learning Support and Emotional Support Students

A continuum of services is available for learning support and emotional support students. Program/course selection is individually tailored to suit the needs and learning style of each student. Special focus is placed on assisting each student in making a smooth transition from high school to his or her chosen post-secondary education or career path. Attention is also directed toward acquisition of social skills, personal development and self-advocacy. Parent involvement is encouraged as a vital component of student success.

Program options include itinerant resource room support, co-taught general education classes in the [core academic areas](#), and learning/emotional support classes in English and Math. Variations are possible based on individual student needs. Students and parents are encouraged to work with a special education teacher and a guidance counselor to insure appropriate course selection that will support the student's post-secondary transition plans.

English and Math courses are available as special education classes. These classes are characterized by small class size, attention to individual needs, and the use of a variety of instructional strategies designed to increase student achievement. Accommodations are tailored to meet the learning needs of each student. Student progress on individual goals is assessed on a regular basis. Emphasis is placed on the development of study skills and [proficiency](#) in meeting standards.

Special Education Programs

(All Grades)

The following programs are provided as defined and mandated by the [Pennsylvania Department of Education](#) to assist those students identified as being in need of an [Individualized Education Program \(IEP\)](#). Contact the Guidance Department for further information about these programs.

- A. Learning Support
- B. Emotional Support
- C. Life Skills Support
- D. Multiple Disabilities Support

Related Service personnel are available to provide for the needs of students with specific disabilities (i.e. hearing, vision, speech, mobility training, physical, therapy, occupational therapy).

The [IEP](#) Team determines the program/services needed to provide an appropriate education.



Upper Bucks County Technical School Course Offerings

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The Upper Bucks County Technical School provides training to 9th-12th grade students from Palisades, Pennridge, and Quakertown Community school districts in High Priority Occupations. All programs prepare students for immediate employment and post-secondary education. For more information on programs, please visit our website: www.ubtech.org. Please note that programs can accommodate students for 1, 2, 3 or 4 years. Consult with guidance counselors for details. Click on the course names below for more information.

[Animal Technology](#)

- Develop veterinary clinical skills such as assessing animal health and administering medications.
- Raise a variety of animals including sheep, pigs, chinchillas, snakes, and ferrets.
- Work in a team with other students to manage a daycare for dogs in our licensed kennels.

[Auto Collision Technology](#)

- Design and produce custom paintwork.
- Interact with customers to assess accident damage and perform structural and paint repairs.
- Use state-of-the-art technologies in our nationally certified ASE program.

[Automotive Technology](#)

- Diagnose, service, and maintain vehicles.
- Earn Pennsylvania Safety Inspection and Emission Inspection licenses.
- Use state-of-the-art technologies in our nationally certified ASE program.

[Baking & Pastry Arts](#)

- Work with professional chefs to create mouth-watering desserts.
- Express individual creativity through baking.
- Build a solid foundation of essential baking methods with attention to detail and quality.

[Cabinetmaking](#)

- Design and build custom furniture and cabinetry.
- Program and operate computerized woodworking machinery.
- Display and sell individually crafted items to the community.

[Career Internship Program](#)

- Earn and learn in a paid internship experience.
- Gain high school [credit](#) for work experience.
- Build a resume that will assist you with college or career.

[Carpentry](#)

- Build structures that will stand the test of time.
- Utilize hand and power tools such as a builder's transit, pneumatic nail and trim guns.
- Read blueprints, survey, frame and finish from foundation to roof.

Construction Technology

- Cross train in a variety of construction areas including: carpentry, electrical, masonry and plumbing.
- Learn how to remodel your own house.
- Use state-of-the-art power tools and construction equipment.

Cosmetology

- Perform hair, skin, and nail services on clients in our on-site salon.
- Show your style by competing against other students in makeup, hair, and nail art competitions.
- Prepare for the PA State Board of Cosmetology Licensing Exam.

Culinary Arts

- Join our restaurant team to operate our Quiet Corner Café.
- Prepare specialty foods and baked goods in a commercial kitchen.
- Explore the inner workings of successful restaurant operations through field trips.

Dental Careers

- Working chair-side, assist a dentist with patients in our onsite dental clinic.
- Use artistic talents to craft dental prosthetics.
- Educate young children on the importance of dental hygiene.

Diesel Technology

- Get the big rigs back on the road using computer based diagnostics and repair.
- Perform mechanical repairs and maintenance on fleet vehicles such as fire trucks, buses, and ambulances.
- Use state-of-the-art technologies in our nationally certified ASE program.

Electrical Technology

- Troubleshoot faulty wiring and perform repairs to the National Electrical Code standards.
- Go green and learn about alternative, solar and wind energy systems.
- Prepare for employment in modern commercial settings with motor control and programmable logic controller (PLC) training.

Graphic Communications

- Create custom displays and printed products in our on-site printing lab.
- Develop a professional portfolio to present to prospective employers and colleges.
- Design computer based graphics using PhotoShop, Indesign, and Illustrator.

Health Care Careers

- Work on site at partnering residential care settings and hospitals.
- Use high-tech equipment such as SimMan, InvaCare Lifts, and the Schiller EKG machine with lung study capability.
- Earn CPR, First Aid, Nurse Aid Certifications and prepare for Pharmacy Technician National Exam.

Landscape Construction & Plant Technology

- Grow edible and ornamental crops in our computer controlled greenhouse.
- Design beautiful landscapes with plants, ponds, walkways, fountains, and more.
- Prepare for a variety of career paths including landscaping, hardscaping, greenhouse production, and floral design.

Law Enforcement/Criminal Science

- Investigate simulated crime scenes.
- Participate in physical training on par with the State Police Academy.
- Learn about the force continuum, weapon safety and Fire Arms Training Simulator (FATS Machine).

Machining Technologies

- Use high-tech computerized equipment to produce precision products used in all industries.
- Make an engineer's design a reality using Computer Numeric Control (CNC) equipment and CAD/CAM software.
- Develop a sound foundation for a career in engineering and manufacturing.

Plumbing Technology

- Use a torch to solder and braze copper tubing.
- Install energy saving units for geothermal and solar heating.
- Design and install residential and commercial fixtures, including laundry, showers, spas, and steam rooms.

Small Engine Technology (no course link available)

- Diagnose and repair small and medium sized engines.
- Work with new and old technologies, from gasoline to electric.
- Work on motorcycles, snow mobiles, tractors, boat motors, and much more.

Welding and Fabrication Technology

- Fabricate individual and team projects for real world applications
- Participate in state-of-the-art virtual reality weld training.
- Melt, form, fuse, and cut metal to specifications.



Terms

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Advanced Placement (AP) Course

(see Course, [Advanced Placement \(AP\)](#))

Anchors

In an effort to provide greater clarity to the field about the assessment system and to better align the assessments to standards and instructional materials, the Department facilitated the development of Assessment Anchors. The Assessment Anchors clarify the standards assessed on the PSSA and Keystone exams and are used by educators to help prepare students.

Source:

http://www.portal.state.pa.us/portal/server.pt/document/1242645/2005_anchorintofinal_pdf?qid=36591004&rank=1

Assessment

Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning.

Source:

[Learner-Centered Assessment on College Campuses: Shifting the Focus from Teaching to Learning](#). Huba and Freed (2000)

Types of assessments used in QCSD include but are not limited to quizzes and tests, project-based assessments, and performance-based assessments.

Assessment, Embedded

Embedded Assessments are performance-based assessments built around the PA Common Core and/or College Board that measure evidence of mastery of skills and knowledge visually, orally and in writing; assessment-specific scoring guides set clear expectations for students.

Source:

<http://springboardprogram.collegeboard.org/>

Assessment, Formative

Formative assessments take place throughout the school year. They helps teachers assess what students have and have not learned, and to predict progress towards assessments of standards.

Formative assessments are valuable objective and subjective data sources for QCSD teachers indicating if students are ready to continue instruction or if remediation is needed before advancing.

Assessment, Summative	<p>Summative assessments test concepts and skills a student has learned rather than testing in order to teach. Performance is measured against progress to the state standards of competency.</p> <p>Source: http://www.pearson.com/glossary.html#S</p> <p>Some examples of summative assessments at different levels of the education system range in form from classroom-level tests to QCSD district-level benchmark exams to state-level Keystone exams.</p>
Blackboard	<p>The Blackboard Learning System™ is an industry-leading software application used to power virtual learning environments, supplement classroom education and as a platform for distance learning programs.</p> <p>Source: http://library.blackboard.com/docs/AS/Bb_Learning_System_Whitepaper_Capabilities.pdf</p> <p>Blackboard is used as a learning tool used by both cyber and non-cyber students, and it is used as a collaboration tool for QCSD staff.</p>
Class Rank	<p>Class ranking is a mathematical summary of a student's academic record compared to those of other students in the class. It usually takes into account both the degree of difficulty of the courses a student is taking (AP®, honors, college-preparatory or regular courses) and the grade the student earns. The compilation of courses and grades is converted to an overall grade point average (GPA), and the higher the GPA, the higher the student's class ranking.</p> <p>Source: http://professionals.collegeboard.com/guidance/applications/rank</p> <p>More information about class rank can be shared by QCSD Guidance Counselors using their contact information at www.qcsc.org/guidance</p>
Competency-Based Grading	<p>Some hallmarks of competency based grading are listed here. Students advance upon mastery. Competencies include explicit, measurable, transferable learning objectives. Students receive timely, differentiated support based on their individual learning needs. Learning outcomes emphasize competencies that include application and creation of knowledge, along with the development of skills and dispositions.</p> <p>Source: http://www.competencyworks.org/about/competency-education/</p>
Competency/Competencies	<p>Competencies: Describe what students should know and be able to do (key skills) as a result of this instruction, specific to grade level.</p> <p>Source: http://www.pdesas.org/module/sas/curriculumframework/</p> <p>Competencies are based on Pennsylvania Core standards and are used to guide a QCSD teacher's assessment practice.</p>
Core Academic Course	<p>(see Course, Core Academic)</p>

Course, Advanced Placement (AP)	The College Board’s AP courses are college-level classes in a wide variety of subjects. They offer challenging course work and a taste of what college classes are like.
	Source: https://bigfuture.collegeboard.org/get-in/testing/learn-about-the-ap-program
	QCSD students have the opportunity to take a variety of AP courses.
Course, Core Academic	The QCSD Board policy defines core courses as English, Mathematics, Science, and Social Studies.
Course, Dual Enrollment	A dual enrollment course is an opportunity for students to earn college credit while still in high school.
	Dual enrollment programs are offered to QCSD students through the Bucks Community College, LCCC and in certain QCSD Cyber language subjects listed in this Programs of Study document.
Course, Elective	Elective courses are classes that a student can take which are not specifically required to graduate or to fulfill a degree. They are generally seen as the opposite of core requirements, which are classes that all students must take unless they have special dispensation.
	Source: http://www.wisegeek.org/what-are-elective-courses.htm
	QCSD students have many elective course offerings listed in this Programs of Study document. Every QCSD student will be required to take electives to attain the required number of credits.
Course, General Interest	A General Interest Course is a category of courses in the QCSD Programs of Study document that includes World Language courses and Music courses.
Course, Specialized Interest	A Specialized Interest Course is a category of courses in the QCSD Programs of Study document that includes but is not limited to elective courses in Art, Business and Information Technology, Dual Enrollment, Family and Consumer Science, Health, Language Arts, Mathematics, Science, Social Studies, Technological Studies and Virtual High School.
Course Quality Points	Grade points, also known as quality points, are assigned based on a numerical indicator of achievement.
Credit	A course is a unit that gives weighting to the value, level or time requirements of an academic course.
	Source: http://en.wikipedia.org/wiki/Course_credit
Cumulative Grade Point Average	(see Grade Point Average, Cumulative)

Cyber	<p>Online learning, also known as virtual or cyber schooling, is a form of distance education that uses the Internet and computer technologies to connect teachers and students and deliver curriculum.</p> <p>Source: http://www.inacol.org/resources/faqs/#whatisol</p> <p>The QCSD Cyber is an online program that was started in 2009 and offers part-time and full-time cyber learning opportunities to students to work both on and off-campus.</p>
Dual Enrollment Course	(see Course, Dual Enrollment)
Distinguished Honor Roll	(see Honor Roll, Distinguished)
Elective Course	(see Course, Elective)
Eligible Content	<p>Eligible Content identifies how deeply an Anchor should be covered and specifies the range of the content to best prepare students for the PSSA and Keystone exams.</p> <p>Sources: http://artseducator20.iu1.wikispaces.net/file/view/SAS-Fact-Sheet-1.pdf/346756296/SAS-Fact-Sheet-1.pdf http://static.pdesas.org/content/documents/PSSA%20PACC%20Mathematics%20AA%20EC%20Grade%2008%20Jan%202013.pdf</p> <p>Eligible content guides QCSD curriculum development, instruction and assessment practice.</p>
Embedded Assessment	(see Assessment, Embedded)
Fail	<p>To receive less than the passing grade or mark in an examination, class, or course of study.</p> <p>Source: http://dictionary.reference.com/browse/fail?s=t</p>
Formative	(see Assessment, Formative)
General Interest Course	(see Course, General Interest)
Grade Point Average (GPA)	<p>The GPA is an indication of a student’s academic achievement calculated as the total number of grade points received over a given period divided by the total number of credits awarded.</p> <p>Source: http://www.oxforddictionaries.com/definition/english/grade-point-average</p> <p>More information about GPA can be shared by QCSD Guidance Counselors using their contact information at www.qcsc.org/guidance.</p>

Grade Point Average, Cumulative	<p>Cumulative Grade Point Average (GPA) refers to the overall GPA, which includes dividing the number of quality points earned in all courses attempted by the total credit hours in all attempted courses.</p> <p>Source: http://gpacalculator.net/how-to-calculate-gpa/cumulative-gpa/</p> <p>More information about Cumulative GPA can be shared by QCSD Guidance Counselors using their contact information at www.qcsd.org/guidance</p>
Grade Point Average, Unweighted	<p>The unweighted GPA is the average of all class grades based on a 4.0 scale. If the student earned an "A" in an advanced English class, the unweighted grade would still be a 4.0-- the corresponding number on standard grade conversion charts--instead of, for example, a (weighted) 4.5. Regardless of class level, each class is graded on the same point system.</p> <p>Source: http://www.scholarships.com/blog/college-culture/weighted-vs-unweighted-gpa/37/</p> <p>More information about Unweighted GPA can be shared by QCSD Guidance Counselors using their contact information at www.qcsd.org/guidance</p>
Grade Point Average, Weighted	<p>In QCSD, certain courses are identified as weighted course. The students' final quality points reflect the identified weighting.</p> <p>More information about Weighted GPA can be shared by QCSD Guidance Counselors using their contact information at www.qcsd.org/guidance</p>
Honor Roll	<p>To be eligible for Honor Roll status in any marking period, a student must obtain a grade point average of 3.5</p> <ul style="list-style-type: none"> - No grade lower than a "C" - No employability grade lower than a 3 <p>Sources: http://dictionary.reference.com/browse/honor+roll http://www.qcsd.org/shshandbook</p> <p>More information about Honor Roll can be shared by QCSD Guidance Counselors using their contact information at www.qcsd.org/guidance</p>
Honor Roll, Distinguished	<p>To be eligible for Distinguished Honor Roll status in any marking period, a student must obtain a grade point average of 3.75</p> <ul style="list-style-type: none"> - No grade lower than a "B" - No employability grade lower than a 3 <p>Source: http://www.qcsd.org/shshandbook</p> <p>More information about Distinguished Honor Roll can be shared by QCSD Guidance Counselors using their contact information at www.qcsd.org/guidance</p>

Individual Education Program (IEP)

The Individualized Education Program (IEP) is a written document required for each student who is eligible to receive special education services. It is provided to a student who has been determined first to have a disability and, second, to need specially designed instruction.

Source:

<http://www.education.com/reference/article/individualized-education-program-iep1/#A>

National Collegiate Athletic Association (NCAA)

The NCAA oversees 89 championships in 23 sports. There are more than 400,000 student-athletes competing in three divisions at over 1,000 colleges and universities within the NCAA. The NCAA maintains a list of courses they approve as NCAA-eligible.

Source:

<http://www.ncaa.org/wps/wcm/connect/public/ncaa/about+the+ncaa/who+we+are+landing+page>

More information about NCAA can be shared by QCSD Guidance Counselors using their contact information at www.qcsc.org/guidance

Pass-Fail

A pass/fail grading system is one in which the student receives either a passing grade or a failing grade.

Source:

<http://classroom.synonym.com/advantages-pass-fail-grading-system-2561.html>

Pennsylvania Core (PA Core)

The PA Core Standards describe what students should know and be able to do from prekindergarten through Grade 12 as established by the Chapter 4 regulations of the Pennsylvania School Codes. The standards provide the targets for instruction and student learning essential for success in academic areas. Although the standards are not a curriculum or a prescribed series of activities, school entities use them to develop a local school curriculum that will meet local students' needs. The standards provide parents and community members with information about what students should know and be able to do as they progress through the educational program and at graduation. With a clearly defined target provided by the standards, parents, students, educators, and community members become partners in learning. Each standard implies an end-of-year goal—with the understanding that exceeding the standard is an even more desirable end goal.

Source:

http://www.portal.state.pa.us/portal/server.pt/community/state_board_of_education/8830

Pennsylvania Department of Education (PDE)	The mission of the Pennsylvania Department of Education is to academically prepare children and adults to succeed as productive citizens. The department seeks to ensure that the technical support, resources and opportunities are in place for all students, whether children or adults, to receive a high quality education.
	<p>Source: http://www.education.state.pa.us/portal/server.pt/community/departme nt_information/7203</p>
	QCSD implements curricular, instructional and assessment standards and practices as outlined in Chapter 4 of the Pennsylvania School Code.
Pre-requisite	Certain advanced and/or technical QCSD courses require students to pass identified courses that teach foundational skills upon which the advanced course is built.
Proficient/Proficiency	In QCSD, proficiency is defined as mastering established learning targets by meeting or exceeding course specific benchmarks. Courses reflect Pennsylvania Core standards requirements.
Program of Study	<p>Programs of Study incorporate secondary education and postsecondary education elements. Courses as listed represent coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education.</p> <p>Source: http://www.education.state.pa.us/portal/server.pt/community/programs_of_study/7686/framework/679310</p>
Quality Points	(see Course Quality Points)
Rank	(see Class Rank)
Remediate	An opportunity for students to increase learning of established learning targets.
Remediation	(see Remediate)
Specialized Interest Course	(see Course, Specialized Interest)
Summative	(see Assessment, Summative)
Unweighted Grade Point Average	(see Grade Point Average, Unweighted)
Weighted Grade Point Average	(see Grade Point Average, Weighted)