



QUAKER VALLEY HIGH SCHOOL PROGRAM OF STUDIES 2018-2019

September 18, 2018 revision

COMPLIANCE STATEMENT

It is the policy of the Quaker Valley School District not to discriminate on the basis of race, sex, religion, color, national origin, age, handicap or limited English proficiency in its educational programs, services, facilities, activities or employment policies as required by Title IX of the 1972 Educational Amendments, Title VI and VII of the Civil Rights Act of 1964, as amended, Section 504 Regulations of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, Section 204 Regulations of the 1984 Carl D. Perkins Act or any applicable federal statute.

For information regarding programs, services, activities, and facilities that are accessible to and usable by handicapped persons or for inquiries regarding civil rights compliance, contact: Quaker Valley School District, 100 Leetsdale Industrial Drive, Suite B, Leetsdale, PA 15056; or the Director of the Office of Civil Rights, Department of Health, Education and Welfare, Washington, D.C.

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Quaker Valley High School

The mission of Quaker Valley High School is to graduate socially responsible and academically skilled individuals who are self-directed, critical thinkers prepared to function in a global society, by continually shaping an ambitious and varied curriculum with high academic, artistic, and ethical standards, coupled with practical experiences gained in school and community.

Dear Students:

The Quaker Valley High School faculty and administration have prepared the 2017-2018 Program of Studies to assist you and your parents in the process of course selection. You will find a wide array of required and elective courses. Your teachers, guidance counselor, office of collegiate affairs director, and principal are available to assist you with goal setting and appropriate course selection as you move toward graduation. You are strongly encouraged to discuss your goals and course options with these individuals and your parents prior to scheduling.

Arena scheduling, a highly personalized process that enables you to create your own schedule according to your specific needs and goals, takes place in April of each school year. Long before the arena takes place, however, you will begin the preliminary planning process, using the scheduling grid/worksheet provided by your guidance counselor. Subsequently, you will make course selections on PowerSchool. Your conscientious work during the pre-arena process beginning in January is necessary to ensure that adequate sections of each course are made available when all students schedule in the spring.

On behalf of the faculty and staff of Quaker Valley High School, we wish you the very best success as you plan your future. We look forward to working with you throughout your high school career.

Sincerely,

Mrs. Deborah Riccobelli
Principal

Quaker Valley School District Administration

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Quaker Valley School District

Shared Vision, Mission and Belief Statements

Shared Vision...

It is our shared vision to become a thriving community of learners in an environment that embraces a culture of thinking.

Mission...

The mission of the Quaker Valley School District is to engage and inspire the hearts and minds of every learner every day.

Belief Statements...

All people want to learn; all people can learn.

Every individual has a unique combination of abilities and attributes that when recognized, nurtured and challenged, promote the realization of potential.

It is our responsibility to nurture in each learner the qualities that prepare our students to be lifelong learners and ethical, responsible citizens.

Communities that invest in youth prosper.

Introduction

Self-Directed Experiential Learning

During Grade 10, students will engage in a self-directed learning experience that will earn 1.0 credits and fulfill a requirement for graduation. Designed to foster talent development in areas of students' personal strengths and interests, these experiences will focus on skills such as initiative, perseverance, time management, communication, responsibility, and problem-solving. Students will participate in a series of seminars to help them to conceive an idea, plan and execute a goal and reflect on what they've learned as they complete the task, project or experience they've designed.

Course Levels

The educational program at Quaker Valley High School provides comprehensive educational programs for students with varied academic needs and interests. Subjects taught at the high school are offered at various levels as follows:

- 3000 Courses demanding high performance standards necessary to prepare for post-secondary education (most sections of English, social studies, math, science, and foreign language)
- 4000 Honors and/or Advanced Placement courses
- 8000 Elective courses (In the scheduling process, preference is usually given first to senior requests, then juniors, etc.)
- 8900 College in High School courses
- 9000 Courses offered at Parkway West Career and Technical Center on a half-day basis as a complement to Quaker Valley's academic program.

Honors Courses

Most classes are in the 3000 or 8000 series. Courses in the 4000 series exceed the curricular scope, intellectual depth, and instructional pacing of comparable courses in the 3000 series. Honors courses carry an added value of .04 for grades of C+ or better.

Advanced Placement

These college level courses require students to meet high standards for success. They require reading and writing skills at a superior level as well as abilities to analyze, synthesize, evaluate, and create. Students selecting these courses must be highly motivated, self-directed learners. AP courses carry an added value of .06 for grades of C+ or better. All students enrolling in AP courses **are required** to take the Advanced Placement exam for that course.

College in High School Courses

Courses offered through the College in High School (CHS) program provide students the opportunity to earn college credit at affiliated institutions while taking courses at Quaker Valley High School. Students will receive an added value of .06 for completing a College in High School course with a grade of C+ or better. Students who choose to pursue college credit will be assessed a fee for the course. The fees are approximately \$235. In addition, students may be responsible for the cost of texts and supporting software. Students may elect to take a CHS course for high school credit only, at no cost.

Internships, Apprenticeship, Work-Based Learning Experience

Quaker Valley High School offers various learning opportunities outside of the classroom. Opportunities can be created, based on student and community requests. Contact Mrs. Keller, Career Education Coordinator, for further information (kellera@qvsd.org).

Global Scholars Credential

While all Quaker Valley High School students matriculate through a relevant, globally focused curriculum emphasizing 21st Century skill development, students who wish to independently explore global topics in more depth may earn the Global Scholars Credential as part of the Global Scholars Program. To earn the Global Scholars Credential, students are required to do the following:

1. **Obtain a grade of B- or better on 5 credits worth of Global Scholars Core Courses (see below).**
2. **Complete three courses (4.5 Credits) of World language study in the same language at the high school level.** In order to reach a high level of proficiency, students must either study the same language for all three courses (at the high school), or they can opt to study a language at the high school level for two courses, and then complete a course that focuses on a Less Commonly Taught Language. (LCTLs).
3. **Complete other required coursework consisting of:**
 4 years/courses of English
 4 credits of Social Studies
 3 years/courses of Math (4 courses are highly recommended)
 3 years/courses of Science (4 courses are highly recommended)
 4 courses of Global Scholars Electives with at least one Technology/Science Elective and at least one of the Art and Expression, Music or Language Arts Electives.
4. **Independently participate in a series of global enrichment experiences (50 credits) and demonstrate learning through a portfolio of works.** Experiences may include, but are not limited to: study abroad, global dual-enrollment coursework, global enrichment workshops, videoconferences, seminars or study groups.

 Denotes a Global Scholars eligible course in the Program of Studies

GLOBAL SCHOLARS CORE COURSES

21 Century English
 CHS Argument, Communication, Rhetoric
 AP English
 9th and 10th grade Language Arts (all levels)
 Global Civics
 World History (all levels)
 Economics
 Contemporary Global Studies
 AP Macroeconomics
 Biology (all levels)
 Environmental Biology
 Self-Directed Experiential Learning

GLOBAL SCHOLARS ELECTIVES

<p>Technology/Science Electives 3703 Introduction to Web Design (.5) 3704 Advanced Web Design (.5) 3706 Introduction to Networking (.5) 3711 Intro to Java Programming (.5) 3712 Intro to Computer Programming w/Python (1.5) 5802hv AP Computer Science QVO (1.5) 86011 Technology and Engineering Fundamentals (.5) 8602 Robotics (.5) 8603 Transportation Technology (.5) 8604 CADD (.5) 8605 Construction Technology/Stage Design (.5) 4315 Honors Research Science (1.0) 3318 Ethics in Science (.5) 4317 AP Environmental Science (1.5) 9923-9925 Digital Multimedia I-III</p>	<p>9932-9934 Information Technology Essentials I-III 99911 Sports Medicine and Rehabilitation Technology I A 4*year of Science counts as an elective.</p> <p>Art and Expression Electives 8813 Ceramics I (.5) 8818 Ceramics II (.5) 8817 Sculpture (.5) 8842 Metals and Jewelry (.5) 8812 Beginning Drawing + Painting (.5) 8841 Intermediate Drawing + Painting (.5) 8816 Advanced Drawing + Painting (.5) 8837 Introduction to Digital Imaging (.5) 8838 Intro to Computer Illustration (.5) 8839 Advanced Digital Imaging (.5) 8840 Advanced Computer Illustration (.5) 8843 3D Design and Animation (.5) 4810 AP Studio Art (1.5) 4808 AP Art History (1.0)</p>	<p>Music Electives 8799 Honors Band (1.5) 8798 Concert Band (1.5) 8802 String Orchestra (1.5) 8803 Concert Choir (1.5) 8823 Comprehensive Musicianship (.5) 8808 Keyboard Lab (.5) 8824 Partners Music (.5) 4820 AP Music Theory (1.5)</p> <p>Language Arts Electives 8101 Introduction to Journalism (.5) 8108 Mythology (.5)</p> <p>Other Electives 8220 Criminal and Civil Law (.5) 8211 Intro to Psychology (.5) 4350 AP Psychology (1.0) 7917 World Vision Internship (.5)</p>
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Special Education

Parents of students who suspect that their child has a disability and is in need of special education may request a multidisciplinary team evaluation of their child through a written request to the building principal or director of pupil services. For additional information pertaining to special education services, please refer to the Quaker Valley School District website at www.qvdsd.org or contact the school counseling office at 412-749-6014.

Arena Scheduling

Arena scheduling at Quaker Valley High School is a highly personalized process that enables students to create their own schedules according to their priorities, preferences, specific needs, and goals. The arena scheduling format, unlike computerized scheduling, engages students and their teachers and counselors in rich discussion and joint decision making, as students create their individual schedules within the framework of a pre-determined master schedule. The design of the master schedule is based on information gathered from students and teachers during the pre-registration phase.

Pre-registration is a process that takes place during students' English classes, with guidance counselors assisting students as they complete the scheduling worksheet grid that is later transferred by the student to PowerSchool. Data from PowerSchool are collected and reviewed by teachers and counselors, and any errors or discrepancies are resolved. The accuracy of the information we obtain during pre-registration is vital to the creation of a quality master schedule.

Occasionally, a student will request a course for which he/she does not have the current teacher's endorsement. Typically this occurs when a student's performance in the prerequisite course does not meet the minimum standard required for the course requested. In such cases, the student and his/her parent may comply with the teacher's recommendation or request a **Team Review Meeting** with the teacher, guidance counselor, and principal or designee, to review the placement recommendation. To override the teacher's recommendation, the student and parent are required to sign a waiver, thereby assuming full responsibility for the choice and accepting the potential consequences of this action. The team review meeting and waiver process facilitate open and frank communication between parents, students, and teachers. This process assures that students and parents clearly understand the basis of the teacher's recommendation, and that students have reasonable access to all courses.

Our first priority with regard to scheduling students is to ensure that graduation requirements are met in a timely manner. For this reason, the arena is organized to accommodate seniors first, followed by juniors, and so on. Within each grade, report rooms are drawn by lottery to determine the order in which students attend the arena. Exceptions to this sequence include certain priority groups, as determined by the building principal, such as band and orchestra, and students with disabilities. Such students may be scheduled in advance of their grade level peers.

The arena takes place in the spring of each school year. One report room of approximately twenty students attends the arena at a time, accompanied by the report room teacher. The arena is well staffed with teachers from each department, guidance counselors, and office of collegiate affairs director, all of whom assist students throughout the process. While students in the lower grades may not get their first choice electives, they will have future opportunities to access those classes, and regardless of grade level, no student will be denied the appropriate core academic course required. At the conclusion of the arena, each student leaves with a copy of his/her tentative schedule. The official copy is mailed to the student in the summer, prior to the start of the school year. Since ample time and guidance are provided to students long before this point, and given that most courses are full by this time, counselors will not change individual schedules. Only the principal may authorize a change to a student's schedule, when absolutely necessary, assuming the requested course is not full.

Customized Curricular Alternatives

Recognizing the unique interests and ambitions of our high school students, we employ a variety of modifications, when necessary, to meet the needs of each learner. These may include adaptations to course requirements, modifications to a student's schedule, and/or adjustments to instructional time and place. A student who wishes to explore alternatives to his/her current course of study is encouraged to see a teacher, a guidance counselor, the secondary academic specialist, or the principal.

Procedures Regarding Secondary and Post-Secondary Courses Taken at Other Institutions

Secondary Level Courses

With the pre-approval of the principal, students may enroll in secondary level courses at other educational institutions for purposes of:

1. Remediation
2. Advancing their studies so that they can move to a higher level in a subject area
3. Accessing courses or programs not available in the school

In such cases, when the student is in 9th grade or beyond, the credit may be noted as part of the student's record, and the student will be appropriately advanced at Quaker Valley High School if he/she has earned a grade of C or better. A second transcript will identify the course and grade earned. These courses will be applied toward graduation requirements; however, they will not be included in grade point average calculations.

Remediation courses must provide 60 hours of instruction for a full credit course.

Demonstrating Proficiency

Students who wish to receive credit for Quaker Valley High School courses by demonstrating proficiency must follow procedures outlined in Section 205.02 of the School Board Policy of Quaker Valley. Criteria for meeting various course standards are available through the principal's office. Students who wish to seek credit for a course by demonstrating proficiency must inform the principal in writing at least one week prior to the start of the course so that appropriate arrangements may be made for testing and reviewing work. When a student successfully completes course work in this manner, he/she shall be awarded credit toward high school graduation with a "P" (pass) grade. This information will be included on a transcript and be noted as "credit by demonstration of proficiency." The student will be eligible for placement in the next level of the course if he or she demonstrates the prerequisite competencies.

Dual Enrollment

Students may explore opportunities to take classes at nearby colleges and universities, and some colleges such as Penn State Beaver and LaRoche may offer high school students a discounted rate. With the pre-approval of the principal, dual enrollment is offered to enhance the opportunities available to our students, not to replace Quaker Valley High School courses within the Program of Studies. Some college courses will allow the student to earn both high school and college credit simultaneously.

The college or university issues grades directly to the dual enrolled student; however, grades earned through dual enrollment are not included in the calculation of the Quaker Valley High School grade point average. Students are responsible for requesting transcripts from the college or university for their records. Students should contact their guidance counselor or the Director of Collegiate Affairs for more information.

Quaker Valley eLearning/QVO (Quaker Valley Online)

Quaker Valley eLearning provides high quality, flexible educational opportunities, which include access to relevant academic and exploratory content, to all Quaker Valley students. The purpose of these opportunities is to enhance the learning experiences of all students and to develop the skills necessary to compete in a global society. Student participation in eLearning is based upon the individual needs of the student and is subject to the eLearning approval process. A review team, headed by the principal, will determine student placement into these courses. Students who elect to participate fully or partly in eLearning as Quaker Valley Students remain members of our learning community and thus have access to all activities and services available to all Quaker Valley students. As Quaker Valley eLearners, all students taking online courses are also subject to policies and procedures outlined in the student handbook.

Students interested in participating in Quaker Valley eLearning opportunities must participate in the eLearning request and enrollment process. The student's counselor, principal, and academic team will determine the appropriateness of the request and make recommendations to the student based upon the student's academic needs or career plans as to the suitability of an online enrollment.

Students are advised to contact their school counselor for direction should they have an interest in QV eLearning opportunities. Quaker Valley Online (QVO) courses are subject to the Online Course Withdrawal Policy. Students who enroll in online courses have 10 days to drop without penalty. If a student drops a course after 10 days, a grade of "WF" and the credit value of the course will appear on his or her transcript. Parents and students are required to read and sign-off on the policy prior to enrolling in an online course.

QVO courses may be scheduled as one of the six periods of the day or as an additional credited class beyond the school day. Online instructors provide content, assignments, feedback, and tests that are monitored by Quaker Valley teachers. Students are required to stay in contact with their online instructor and should notify the QV teacher if they are experiencing difficulty with the online instructor. Students join virtual classmates from all over the country in discussions, peer editing, and other collaborative activities via the laptop computers. All students enrolled in AP online courses **are required** to take the associated Advanced Placement Examination for the enrolled course. Students will be issued a grade based on performance throughout the course that will be added to the official transcript along with credit. Students taking AP courses who earn a grade of C+ or higher will receive an added value of .06 into the GPA. Enrollment slots are limited. QVO courses run on a semester schedule rather than the high school trimester schedule.

Course Titles

Art

- 8813 Ceramics I (.5)
- 8818 Ceramics II (.5)
- 8817 Sculpture (.5)
- 8842 Metals and Jewelry (.5)
- 8812 Beginning Drawing & Painting (.5)
- 8841 Intermediate Drawing & Painting (.5)
- 8816 Advanced Drawing & Painting (.5)
- 8837 Introduction to Digital Imaging (.5)
- 8838 Introduction to Computer Illustration (.5)
- 8839 Advanced Digital Imaging (.5)
- 8840 Advanced Computer Illustration (.5)
- 8843 3D Design and Animation (.5)
- 4810 AP Studio Art (1.5)
- 4808 AP Art History (1.5)

English and Communication Skills

- 3108 English and Composition 9 (1.5)
- 4108 Honors English and Composition 9 (1.5)
- 3110 English 10 (1.5)
- 4110 Honors English 10 (1.5)
- 3111 English 11 (1.0)
- 4111 Honors English 11 (1.0)
- 4113 AP English Literature and Composition (1.5)
- 8101 Introduction to Journalism (.5)
- 8116 21st Century English (.5)
- 8117 Science Fiction Literature (.5)
- 8118 Elements of Humor (.5)
- 8122 Sports Literature (.5)
- 8910 CHS Argument, Communication & Rhetoric (1.0)
- 8108 Mythology (.5)
- 8113 Creative Writing (.5)
- 8123 Adv. Creative Writing (.5)
- 8115 Literature on the Stage Theatre I (.5)
- 8121 Literature on the Stage Theatre II (.5)
- 3115 Language Arts I (1.0)
- 3116 Language Arts II (1.0)
- 3100 Standards Based Reading (.5)

Family and Consumer Sciences

- 8701 Foods I (.5)
- 8708 Cooking Essentials (.5)

Computer Science

- 3706 Intro to Networking (.5)
- 3703 Intro to Web Design (.5)
- 3704 Adv Web Design (.5)
- 3711 Intro to Java Programming (.5)
- 3712 Intro to Computer Programming w/Python (1.5)
- 4450 AP Computer Science Principles (1.5)

Mathematics

- 3405 Algebra I (1.5)
- 3420 Computer Algebra II (1.5)
- 3421 Algebra II (1.5)
- 4421 Honors Algebra II (1.5)
- 3409 Geometry (1.5)
- 3407 Computer Geometry (1.5)
- 3411 Functions, Statistics & Trigonometry (1.5)
- 4410 Honors Functions, Statistics and Trigonometry (1.5)
- 3413 Precalculus (1.5)
- 4408 Honors Precalculus (1.5)
- 4412 AP Calculus (AB) (1.5)
- 4415 AP Calculus (BC) (1.5)
- 8913 CHS Calculus (1.5)
- 8405 Statistics (1.5)

Music

- 8799 Honors Band (1.5)
- 8798 Concert Band (1.5)
- 8802 String Orchestra (1.5)
- 8803 Concert Choir (1.5)
- 8823 Comprehensive Musicianship (.5)
- 8808 Keyboard Lab (.5)
- 8824 Partners Music (.5)
- 4822 AP Music Theory (1.0)

Physical Education/Wellness

- 8005 Health & Wellness I (.5)
- 8006 Health & Wellness II (.5)
- 80010 Physical Education (.5)
- 80020 Independent Physical Education (.5)
- 80030 Partners Physical Education (.5)

Pre-Engineering Technology

- 86011 Technology and Engineering Fundamentals (.5)
- 8602 Robotics (.5)
- 8603 Transportation Technology (.5)
- 8604 CADD (.5)
- 8605 Construction Technology/Stage Design (.5)

Science

- 3308 Environmental Biology (1.5)
- 3307 Principles of Biology (1.5)
- 3309 Biology (1.5)
- 4309 Honors Biology (1.5)
- 3311 Chemistry (1.5)
- 3304 Integrated Physical Science (1.0)
- 3314 Concept Physics (1.0)
- 3313 Physics (1.5)
- 4315 Honors Research Science (1.0)
- 3318 Ethics in Science (.5)
- 4310 Honors Chemistry (1.5)
- 4311 AP Biology (1.5)
- 4312 AP Chemistry (1.5)
- 4316 AP Physics I (1.5)
- 4317 AP Environmental Science (1.5)

Social Studies

- 3208 Global Civics (1.0)
- 3210 World History (1.0)
- 4210 Honors World History (1.0)
- 4209 AP World History (1.5)
- 3211 U.S. History (1.0)
- 4211 Honors U.S. History (1.0)
- 4212 AP U.S. History (1.5)
- 3213 Economics (.5)
- 3207 Contemporary Global Studies (.5)
- 8211 Introduction to Psychology (.5)
- 4350 AP Psychology (1.0)
- 8220 Criminal and Civil Law (.5)
- 8860 Modern History through Pop Culture (.5)
- 4214 AP US Government and Politics (1.0)
- 8126 Introduction to Women's Studies (.5)

World Language

- 3525 French I (1.5)
- 3528 French II (1.5)
- 3529 French III (1.5)
- 4520 Honors French IV (1.5)
- 4314 AP French (1.5)
- 3543 Spanish I (1.5)
- 3544 Spanish II (1.5)
- 3541 Spanish III (1.5)
- 4503 Honors Spanish IV (1.5)
- 4512 AP Spanish (1.5)

Self-Directed Experiential Learning

- 7928 Self-Directed Experiential Learning (1.0)

Internships –Apprenticeships –Work-Based Learning Experience

- 7920 PhD Manager/Tutor Intern (.5)
- 7921 PhD Technology Intern (.5)
- 7906 Teacher Assistant (.5)
- 7907 Work-Based Learning Experience (.5+)
- 7911 Environmental Science Internship (.5)
- 7917 World Vision Internship (.5)
- 7922 ACE Internship (.5)
- 7924 QV Coffee Shop Internship (.5+)
- 7925 CMU ETC Apprenticeship (.5)

QVO-Quaker Valley Online Courses

- 5105hv AP English Language and Composition QVO (1.5)
- 5802hv AP Computer Science QVO (1.5)
- 5203hv AP Statistics QVO (1.5)
- 5402hv AP Macroeconomics QVO (.75)
- 5401hv AP Microeconomics QVO (.75)
- 5711hv Marketing QVO (.75)
- 5710hv Accounting QVO (.75)
- 5325hv Anatomy and Physiology QVO (.75)

Career Technical Center Programs*

- 9911-99915 Auto Body Repair I-IV
- 9914-99918 Auto Technology I-IV
- 9920 Construction Technology I
First year cluster consists of:
Building Construction Technology,
Electrical Systems Technology,
Welding Technology and HVAC/R
Years two to four select a concentration from the four areas above.
- 9929-99933 Cosmetology I-IV
- 9902 Nail Technician License
- 9968-99972 Culinary Arts I-IV
- 9923-99927 Digital Multimedia I-IV
- 9947-99951 Health Assistant I-IV
- 99907 Pharmacy Technician Certification
- 99909 Phlebotomy Technician Certification
- 9980-99984 Information Technology Essentials I-IV
- 9977-9983 Public Safety Tech I-IV
- 9987-99991 Veterinary Technology I-IV
- 99911-99916 Sports Medicine and Rehabilitation Technology I-IV

*The courses listed above are taken at Parkway Career & Technical Center. CTC programs are 4.5 credits.

Art

The art curriculum is designed to bring about a basic understanding of art and to broaden the cultural horizons of students. It seeks to have students appreciate art as a basic human activity/response that deepens understanding of one's self and one's world.

The curriculum offers both a sequence of courses that develops artistic skills and individual courses that focus on awareness and exploration. This balance creates opportunities for all students. Portfolio development should be an ongoing activity as students move through the program.

8813 CERAMICS I Grades 9 – 10 .5 credit/1 Trimester



Prerequisite: None

Objectives: Students will learn basic techniques in this entry-level three-dimensional class focusing on the medium of clay.

Description: This is the first course for students interested in pursuing 3-D artwork. This course is the pre-requisite for all other 3-D courses and must be taken sequentially. Students will learn basic hand-building and wheel construction techniques. Students will also explore texture, glazing and other decorative techniques. Students will learn basic terminology in relationship to ceramics. Students will study ceramics in terms of art historical context, aesthetics and art criticism.

Expectations: Students will complete all projects related to hand-building techniques; complete at least one project using the potter's wheel; learn glazing, texturing, and other surface techniques; keep a developmental workbook; and research in an area of focus.

8818 CERAMICS II Grades 10 -12 .5 credit/1 Trimester



Prerequisite: Ceramics I

Objectives: Students will learn advanced techniques and conceptual approaches in this second section of ceramics focusing on the medium of clay.

Description: This is the second course for students interested in pursuing ceramic artwork. Students will explore more advanced hand-building and wheel construction.

8817 SCULPTURE Grades 10 – 12 .5 Credit/1 Trimester



Prerequisite: None

Objectives: Students will build on their knowledge of 3-D form learned in ceramics and explore other media used to create sculpture, beginning to build a 3-D repertoire.

Description: Students should have completed ceramics with a foundational understanding of hand building. Students will continue exploring various media and its conceptual and functional potential. Students will develop a fundamental understanding of moving from 2-D to 3-D. Students will have the opportunity to develop their personal relationship with sculpture as a vehicle for conceptual thinking. Students will participate in class critiques and discussions.

Expectations: Students will use a variety of media as a vehicle for conceptual ideas. Students will learn about sculptural methods, techniques, past and current artists whose main medium is sculpture. Students will keep a developmental workbook.

8842 METALS AND JEWELRY
Grades 11 – 12
.5 Credit/1 Trimester



Prerequisite: None

Objectives: Students will continue to build on their knowledge of 3-D media to create their own conceptual work.

Description: Students should have completed ceramics I and sculpture and be prepared to continue to work with metal to explore its conceptual and functional potential. Students will be introduced to basic metalsmithing techniques including jewelry making and enameling.

Expectations: Students will use metals as a vehicle for conceptual ideas. Students will explore a variety of more advanced techniques and media including metalsmithing and enameling. Students will keep a developmental workbook and participate in class critiques.

8812 BEGINNING DRAWING & PAINTING
Grades 9 – 10
.5 Credit/1 Trimester



Prerequisite: None

Objectives: Students will build on their knowledge of the Elements and Principles of Art in this entry level two-dimensional class focusing on drawing and painting media.

Description: This is the first course for students interested in two-dimensional work. This course is the prerequisite for all other two-dimensional art courses and must be taken sequentially. Students will demonstrate an understanding of terms related to painting and drawing and develop more advanced skills in those areas. Students will learn about techniques and how to apply the medium in a conceptual way through hands-on exploration and the introduction to art in the context of history, aesthetics, and criticism.

Expectations: Students will review and develop a deeper understanding of the Elements and Principles of Art; complete drawing assignments; complete painting tasks in watercolor, acrylic, and exploration in oil mediums; students will keep a developmental workbook.

8841 INTERMEDIATE DRAWING & PAINTING
Grades 10 – 12
.5 Credit/1 Trimester



Prerequisite: Beginning Drawing and Painting

Objectives: Students will build on their knowledge of drawing and painting media with a variety of techniques and 2-D media.

Description: This course builds on terms and use of media related to two-dimensional work explored in drawing and painting. Students will explore a variety of media including printmaking. Students will begin to develop their own personal voice in art making using a variety of two-dimensional media building on conceptual thinking.

Expectations: Students will complete all drawing, painting and other 2-D media assignments. Students will keep a developmental workbook. Students will participate in class critiques and discussions.

8816 ADVANCED DRAWING & PAINTING
Grades 11 -12
.5 Credit/1 Trimester



Prerequisite: Beginning Drawing and Painting and Intermediate Drawing and Painting

Objectives: Students will continue to build on the knowledge learned in Two-Dimensional Art focusing on a variety of media to create their own conceptually based work.

Description: This course continues to build on terms and use of media related to two-dimensional work previously explored. Students will begin to develop portfolios of their artwork incorporating a variety of media. Students will continue to develop their own personal voice in art making using a variety of media to explore and build upon conceptual thinking. Students will learn advanced techniques and concepts through hands-on exploration and the study of art in the context of art history, aesthetics, and criticism.

Expectations: Students will complete all drawing, painting and other 2-D media assignments. Students will keep a developmental workbook; participate in class critiques, and begin to build a portfolio of artwork.

8837 INTRODUCTION TO DIGITAL IMAGING

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: None

Objectives: Students will be introduced to digital imaging and will learn how to use imaging software and hardware.

Description: Introduction to Digital Imaging is an entry-level class in the art of working with digital imagery. Students learn use to software such as Adobe Photoshop and hardware devices such as digital cameras and scanners in addition to using Photoshop's tools, manipulating digital images, create selections, and repair photographs. They will also learn about contemporary digital artists, how graphics are created on computers, and how Photoshop is used in the industry. **This class is offered on a rotating schedule.**

Expectations: Students will be able to use a digital camera, scanner, and software to edit photographs. They will be able to make accurate selections and use the basic tools and functions of the software.

8838 INTRODUCTION TO COMPUTER ILLUSTRATION

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: None

Objectives: Students will learn how to create artwork on the computer using a vector based illustration program.

Description: Introduction to Computer Illustration will be an entry-level class in creating artwork on the computer. Students will be using computers, scanners, and other tools to create vector-based drawings using software such as Adobe Illustrator. Students will learn basic Illustrator tools and techniques as they create drawings for a variety of applications such as advertising and the web. Students will examine different types of computer illustration from comics and fashion design to technical illustration. **This class is offered on a rotating schedule.**

Expectations: Students will be able to use the basic tools and menus in the software to create original works. Students will have an understanding of basic graphic arts concepts.

8839 ADVANCED DIGITAL IMAGING

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: Intro. to Digital Imaging

Objectives: Students will learn advanced techniques for working with digital images.

Description: Students taking Advanced Digital Imaging will continue to learn the intricacies of Adobe Photoshop and will learn the more advanced techniques and tools. Students will explore how to create styles, custom shapes, patterns, animated gifs, composite images, and typography. They will be creating more complex images for use on the web or in print and will create a digital portfolio of their work.

Expectations: Students will be able to use the software tools to create more advanced works. They will be proficient at making selections and will be able create their own custom tools.

8840 ADVANCED COMPUTER ILLUSTRATION

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: Intro. to Computer Illustration

Objectives: Students will continue to learn how to use the software to create original vector artwork.

Description: Advanced Computer Illustration will focus on honing the students Illustrator skills. They will learn to use and create custom brushes, patterns, styles, envelopes, and filters. They will learn to incorporate files from Photoshop and other programs and will create a digital portfolio of their work. **This class is offered on a rotating schedule.**

Expectations: Students will complete all projects and will demonstrate a better understanding of the tools and processes of the graphics arts.

8843 3D DESIGN AND ANIMATION

Grades 9-12

.5 Credit/1 Trimester



Prerequisite: None

Objectives: Students will learn how to create 3D graphics and animation.

Description: 3D Design and Animation will be a course to introduce students to the concepts and software used to create 3 dimensional environments. 3D design and animation is used heavily in today's movies, video games, engineering, and architecture. Students will learn how to create 3D objects, apply colors and textures, and animate the object.

Expectations: Students will understand the concepts of 3D animation and design

4810 AP STUDIO ART

Grade 12

1.5 Credits/3 Trimesters



Prerequisite: All students enrolled in AP level course must have completed previous courses from the art sequence and/or have permission from the instructor.

Objectives: Students will develop a body of 25 + works. The goal of the course is to create a portfolio for submission to the College Board for college credit. The AP Studio portfolio consists of 3 sections, the breadth section – comprised of teacher driven assignments, the concentration section – comprised of an area of conceptual focus chosen for exploration by the student, and the quality section – comprised of 5 works that represent the students' best work.

Description: AP Studio Art is an in-depth, advanced level course focused on the creation of a portfolio for the College AP portfolio examination. The course is a full year course focusing on the three sections of the portfolio: breadth, concentration, and quality in the student's chosen area of focus. Students will be expected to produce a minimum of 25 high quality pieces for the portfolio with the expectation of the completion of 4 finished works completed over summer break. Students are also required to keep a sketchbook. Students will participate in some type of field study (i.e. local field trip to an art museum) to further augment their knowledge of the arts. Students will participate in group and individual critiques. Students will achieve a high understanding of both criticism and aesthetics and apply it to their work and others. This advanced level course allows for the growth of students not only technically but also conceptually in their chosen area of focus.

Expectations: Students will complete a portfolio of no less than 25 works of art in a chosen area of concentration; participate in class critiques and discussion; keep a sketchbook, and participate in all field and group activities.

4808 AP ART HISTORY
Grades 11-12
1.5 Credits/3 Trimesters



Prerequisite: None

Objectives: Students will: Apply fundamental art and art historical terminology; Develop an appreciation for the process of making and displaying art; Understand the purpose and function of art; Develop the ability to analyze works of art in context of historical evidence and interpretation, examining such issues as politics, religion, patronage, gender, and ethnicity; Understand the cross-cultural and global nature of art; Develop the ability to perform higher order thinking skills and articulate visual and art historical concepts in verbal and written forms.

Description: This course will engage students at the same level as an introductory college art history survey class. This class will involve critical thinking and students will develop an understanding and knowledge of diverse historical and cultural contexts of architecture, sculpture, painting and other media. In this course, students examine and critically analyze major forms of artistic expression from the past and the present from a variety of cultures. Art history emphasizes understanding how and why works of art function in context, considering such issues as patronage, gender and the functions and effects of works of art.

Expectations: The course does not require prior knowledge of art history, or the desire to major in art history in college. It requires a high degree of commitment to academic work and to the purposes of a program designed to meet college standards. Students who have done well in other humanities, such as history and literature, or in any of the studio arts, are especially encouraged to enroll.

English and Communication Skills

Graduation Requirements

All students must fulfill the district's graduation requirements of 5.0 credits of English (equivalent to 4 years) in grades 9-12.

Placement in Courses

In order to achieve and grow in English and communication skills, it is crucial that students be placed in the appropriate course at the appropriate time. Care will be given to assure that students have the requisite skills for success in a particular course before enrollment is approved.

Placement or continuation in honors level courses will be based on:

1. Grades in previous English courses
2. Scores on standardized tests of aptitude and achievement in both reading and writing areas
3. Recommendation of the previous year's teacher

COURSE EXPECTATIONS (HONORS ENGLISH—4000 LEVEL COURSES)

Reading expectations

- **Prerequisite reading skills:** Students will be expected to read and comprehend texts independently. They will be quizzed on these readings and will be expected to recall and comprehend the readings with minimal teacher intervention.
- Literature selections will be challenging in terms of readability, vocabulary, and length. Literature study will focus on analyzing, synthesizing, and evaluating and will assume the student is able to comprehend and interpret texts independently.
- Students are required to read the equivalent of at least **four** major works during this course. In addition, they will read pieces of shorter fiction, non-fiction, and poetry.
- Students are encouraged to read a summer reading selection from the Sewickley Area Libraries (SAL) summer reading list.
- Students enrolled in Honors English 11 and AP English Literature and Composition are expected to complete a summer reading assignment, as these are advanced, accelerated courses.

Writing expectations

- **Prerequisite writing skills:** Students are expected to be able to write an essay that is focused, and uses specific support and elaboration. These essays should also be clearly organized and structured including effective topic sentences, transitions, introduction, and conclusion. Students are also expected to use a variety of sentence types and lengths in their writing, and show a mastery of basic writing conventions such as mechanics, usage, and grammar. Writing instruction will build on these skills and focus on enhancing style and voice.
- Students will complete the equivalent of a **minimum of four formal writings** during this course. In addition, students are required to complete multiple informal writings per term.

Other expectations

- Students are required to possess a consistent and positive work ethic and the ability to work independently. Students are also expected to be well organized and able to manage their time efficiently.
- Participation in daily discussions and oral presentations is an integral part of this course. Each term grade includes an assessment of student participation in class discussions.
- Students are required to complete **at least 4-6 hours of work per week** outside of the regular school day.

COURSE EXPECTATIONS (ENGLISH—3000 LEVEL COURSES)

Reading expectations

- Students are required to read and comprehend texts studied in class.
- Literature study will focus on comprehending, interpreting, analyzing, synthesizing and evaluating.

- Students are required read the equivalent of at least **three** major works during this course. In addition, they will read pieces of shorter fiction, non-fiction, and poetry.
- Students are encouraged to read a summer reading selection from the Sewickley Area Libraries (SAL) summer reading list.

Writing expectations

- Students will be taught to create essays that are focused, and use specific support and elaboration. These essays will also be clearly organized and structured including effective topic sentences, transitions, introduction, and conclusion. Students will also learn to use a variety of sentence types and lengths in their writing, and show a mastery of basic writing conventions such as mechanics, usage, and grammar.
- Students will complete the equivalent of a minimum of **three formal writings** during this course. In addition, students are required to complete multiple informal writings per term.

Other expectations

- Students will possess a consistent and positive work ethic. Students are also expected to be well organized and able to manage their time efficiently.
- Students are expected to participate in daily discussions and oral presentations.
- Students will complete and average of 2-3 hours of work per week outside of the regular school day.

3108 ENGLISH AND COMPOSITION 9

Grade 9

1.5 Credits/3 Trimesters



Prerequisite: English 8

Objectives: 1. to read, understand, and respond to informational texts; 2. to read, understand, and respond to works of literature; 3. to write for different purposes and audiences; 4. to write clear and focused texts to convey a well-defined perspective and appropriate content; 5. to present appropriately in formal speaking situations, listen critically, and respond intelligently as individuals or in group discussions; 6. to prepare students for the Keystone Literature and PSAT Reading and Writing standardized assessments

Description: This course focuses on developing competency in reading, writing, literary analysis, speaking and listening, critical thinking, organization, vocabulary, and grammar. Students will read and analyze multicultural plays, novels, short stories, and poems in addition to nonfiction texts such as current event articles, essays, and speeches. The course devotes 12 weeks to grammar and composition, refining students' writing skills through the writing and revision process and applying practiced grammar and usage concepts. Students will learn and apply research skills for a sustained research project, evaluating and synthesizing multiple sources pertaining to a single topic. Writing assignments will encompass various modes, such as informative/explanatory, opinion/argumentative, narrative, response to literature, research, and creative writing. Reading and writing skills will be applied to "cold read" assessments at the conclusion of appropriate units or terms. Vocabulary will be taught in context of selected texts. Literary devices will be reviewed and taught as appropriate to analyzing literature.

4108 HONORS ENGLISH AND COMPOSITION 9

Grade 9

1.5 Credits/3 Trimesters



Prerequisite: Honors English 8 (Fast track) or recommendation of teacher from preceding year

Objectives: 1. to read, understand, and respond to informational texts; 2. to read, understand, and respond to works of literature; 3. to write for different purposes and audiences; 4. to write clear and focused texts to convey a well-defined perspective and appropriate content; 5. to present appropriately in formal speaking situations, listen critically, and respond intelligently as individuals or in group discussions; 6. to prepare students for the Keystone Literature and PSAT Reading and Writing standardized assessments

Description: This course focuses on developing aptitude in reading, writing, literary analysis, speaking and listening, critical thinking, organization, vocabulary, and grammar. Students will independently read and analyze multicultural plays, novels, short stories, and poems in addition to nonfiction texts such as current event articles, essays, and speeches. The course devotes 12 weeks to grammar and composition, refining students' writing skills through the writing and revision process and applying practiced grammar and usage concepts. Writing lessons will focus on enhancing style and voice as well as incorporating a perceptive selection of evidence. Students will learn and apply research skills as well as evaluating and synthesizing multiple sources pertaining to a single topic. Writing assignments will encompass various modes, such as informative/explanatory, opinion/argumentative, narrative, response to literature, research, and creative writing. Reading and writing skills will be applied to "cold read" assessments at the conclusion of appropriate

units or terms. Vocabulary will be taught in context of selected texts. Literary devices will be reviewed and taught as appropriate to analyzing literature. Higher-order thinking will be stressed throughout the year.

3110 ENGLISH 10
Grade 10
1.5 Credits/3 Trimesters



Prerequisite: English and Composition 9

Objectives: 1. to read, understand, and respond to informational texts; 2. to read, understand, and respond to works of literature; 3. to write for different purposes and audiences; 4. to write clear and focused texts to convey a well-defined perspective and appropriate content; 5. to present appropriately in formal speaking situations, listen critically, and respond intelligently as individuals or in group discussions; 6. to prepare students for the Keystone Literature and PSAT Reading and Writing standardized assessments

Description: This course focuses on reinforcing and further developing competency in reading, writing, literary analysis, speaking and listening, critical thinking, organization, vocabulary, and grammar. Students will read and analyze plays, novels, short stories, and poems in addition to nonfiction texts such as current event articles, essays, and speeches. Students will refine their grammar skills through the writing and revision process as well as through grammar-specific lessons and activities. The course devotes 12 weeks to speaking and listening through the study and analysis of effective speech and composition of original speech. Students will apply research skills when writing speeches and literary analysis compositions. Writing assignments will encompass various modes, such as informative/explanatory, opinion/argumentative, narrative, response to literature, research, and creative writing. Reading and writing skills will be applied to “cold read” assessments at the conclusion of appropriate units or terms. Vocabulary will be taught in context of selected texts. Literary devices will be reviewed and taught as appropriate to analyzing literature.

4110 HONORS ENGLISH 10
Grade 10
1.5 Credits/3 Trimesters



Prerequisite: Honors English and Composition 9

Objectives: 1. to read, understand, and respond to informational texts; 2. to read, understand, and respond to works of literature; 3. to write for different purposes and audiences; 4. to write clear and focused texts to convey a well-defined perspective and appropriate content; 5. to present appropriately in formal speaking situations, listen critically, and respond intelligently as individuals or in group discussions; 6. to prepare students for the Keystone Literature and PSAT Reading and Writing standardized assessments

Description: This course focuses on reinforcing and further developing aptitude in reading, writing, literary analysis, speaking and listening, critical thinking, organization, vocabulary, and grammar. Students will independently read and analyze plays, novels, short stories, and poems in addition to nonfiction texts such as current event articles, essays, and speeches. Students will refine their grammar skills through the writing and revision process as well as through grammar-specific lessons and activities. Writing lessons will focus on enhancing style and voice as well as incorporating a perceptive selection of evidence. The course devotes 12 weeks to speaking and listening through the study and analysis of effective speech and composition of original speech. Students will apply research skills when writing speeches and literary analysis compositions. Writing assignments will encompass various modes, such as informative/explanatory, opinion/argumentative, narrative, response to literature, research, and creative writing. Reading and writing skills will be applied to “cold read” assessments at the conclusion of appropriate units or terms. Vocabulary will be taught in context of selected texts. Literary devices will be reviewed and taught as appropriate to analyzing literature. Higher-order thinking will be stressed throughout the year.

3111 ENGLISH 11
Grade 11
1 Credit/2 Trimesters

Prerequisite: English 10

Objectives: 1. to read, understand, and respond to informational texts; 2. to read, understand, and respond to works of literature; 3. to write for different purposes and audiences; 4. to write clear and focused texts to convey a well-defined perspective and appropriate content; 5. to present appropriately in formal speaking situations, listen critically, and respond intelligently as individuals or in group discussions; 6. to prepare students for the SAT Reading and Writing standardized assessments

Description: The course concentrates on American literature, emphasizing the necessity for reading, thinking, and responding critically in both speaking and writing. Novels and drama are the focus of small and large group activities, reader's theatre, write-to-learn responses, and longer essays.

4111 HONORS ENGLISH 11
Grade 11
1 Credit/2 Trimesters

Prerequisite: Honors English 10

Objectives: 1. to read, understand, and respond to informational texts; 2. to read, understand, and respond to works of literature; 3. to write for different purposes and audiences; 4. to write clear and focused texts to convey a well-defined perspective and appropriate content; 5. to present appropriately in formal speaking situations, listen critically, and respond intelligently as individuals or in group discussions; 6. to prepare students for the SAT Reading and Writing standardized assessments

Description: This course focuses on reinforcing and further developing propensity in reading, writing, literary analysis, speaking and listening, critical thinking, organization, vocabulary, and grammar. Students will independently read and analyze plays, novels, short stories, and poems in addition to nonfiction texts such as current event articles, essays, and speeches. Students will refine their grammar skills through the writing and revision process as well as through grammar-specific lessons and activities. Writing lessons will focus on mastering style and voice as well as incorporating a perceptive selection of evidence. Students will thoroughly research a selected author's life and works, analyze his/her impact on American literature, and convincingly argue a comprehensive literary analysis. Writing assignments will encompass various modes, such as informative/explanatory, opinion/argumentative, narrative, response to literature, research, and creative writing. Reading and writing skills will be applied to "cold read" assessments at the conclusion of appropriate units or terms. Vocabulary will be taught in context of selected texts. Literary devices will be reviewed and taught as appropriate to analyzing literature. Higher-order thinking will be stressed throughout the year.

4113 AP ENGLISH LITERATURE AND COMPOSITION

This is a college-level course.

Grade 12

1.5 Credits/3 Trimesters



Prerequisite: Honors English 11

Objectives: 1. To offer students a college-level seminar course which challenges them to explore other cultures and interpret various literary genres and periods; 2. to refine writing skills, enhancing style and voice; 3. to prepare students for demanding college English programs as well as the AP examination

Description: The AP English Literature and Composition course engages students in the careful, perceptive reading and critical analysis of imaginative literature. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. In the broadest sense, this close reading involves the experience of literature, the interpretation of literature, and the evaluation of literature. In more specific terms, the close reading expectations demand that students consider a work's structure, themes, and characterization, as well as such smaller-scale elements as the use of figurative language, imagery, and different types of repetition. The course includes intensive study of representative works from various genres and periods, concentrating on works of recognized literary merit that build upon the reading completed in previous English courses. Students will also read and analyze different types of poetry, from the sonnet to the sestina, and ultimately complete an intensive poetry research project. Writing assignments primarily focus on the critical analysis of literature and include expository, analytical, and argumentative essays, yet there are also opportunities for professional writing, creative writing, and writing critical reviews. Throughout the course, emphasis is placed on assisting students develop stylistic maturity in their own writing. Students are required to take the AP Literature and Composition exam.

8101 INTRODUCTION TO JOURNALISM

Grades 10 – 12

.5 Credit/1 Term



Prerequisite: None

Objectives: 1. To introduce students to the basic principles of journalistic writing and to some aspects of newspaper production; 2. to develop skills in the areas of effective interviewing, listening, critical reading, and journalistic writing; 3. to acquaint students with desktop publishing

Description: Students will study the fundamental principles of reporting and writing so as to stress accuracy, brevity, and clarity. Issues of reportorial responsibility will be examined. Basic editing skills, production, and an introduction to desktop publishing will round out the course.

8116 21st CENTURY ENGLISH
Grade 12
.5 Credit/1 Trimester



This course is mandatory unless taking AP English Literature or CHS Argument, Communication, and Rhetoric.

Objectives: 1. To explore, analyze, and productively respond to the complexities of identity, culture, and comprehensive awareness in the 21-century; 2. To further develop and refine skills in research, critical thinking, communication, collaboration, and leadership

Description: This course is designed to empower students to investigate, understand and better manage factors that affect one's values, global perspective, career opportunities, decision-making abilities, sense of duty and overall success as independent adults. Specifically, our class will encompass an eclectic study of contemporary fiction and nonfiction, including social science, relevant news stories, novels, memoir passages, poetry and career coaching. Students will be required to utilize technology regularly and responsibly, ranging from proper online etiquette to Noodle Tools research. Furthermore, students will sharpen and effectively demonstrate their "soft skills" (i.e. listening, empathy, clarity and concision in writing/speaking, confidence, open-mindedness, etc.) for such tasks as job interviewing, Socratic seminars, reflections, debates, and various projects/presentations.

8117 SCIENCE FICTION LITERATURE
Grade 12
.5 Credit/1 Trimester

Prerequisite: English 11

Objectives: 1. To recognize science fiction as a distinct literary genre; 2. to examine the evolution of science fiction from dime novels to the Internet; 3. to interpret science fiction's insights about human nature and society; 4. to evaluate the literary qualities and style of science fiction; 5. to explore the appeal and impact of science fiction

Description: This course will focus on the definition, message, method, and impact of science fiction. Students will read critically-acclaimed literature and thematically related articles, explore issues on the Internet, and scrutinize the genre in popular culture. Through writing, online exchanges, and classroom discussions and presentations, students will share their findings and viewpoints regarding this unique and powerful genre. Students are required to read one science fiction novel in addition to shorter works of literature and non-fiction texts which enhance their understanding about the genre.

8118 ELEMENTS OF HUMOR
Grade 12
.5 Credit/1 Trimester

Prerequisite: English 11

Objectives: 1. To analyze and evaluate various theories of humor; 2. to compare and contrast basic genres of humor, including the presence or absence of social consciousness; 3. to correlate narrower types of humor to the genres they typically inhabit; 4. to evaluate the literary qualities and style of humor in selected works; 5. to recognize and utilize specific devices of humor; 6. to explore the appeal and impact of humor on society

Description: This course will explore the fundamentals of comedy. What makes people laugh and why? Is there a theory of humor connecting all varieties of comedy? What are the effects of humor on the individual and society? Students will be exposed to school-appropriate novels and other readings, standup, and excerpts from radio, film and television that exemplify the theories, genres, types, and devices of humor covered in class. Students are required to read one novel in addition to shorter works of literature and non-fiction texts which enhance their understanding about the genre.

8122 SPORTS LITERATURE
Grade 12
.5 Credit/1 Trimester

Prerequisite: English 11

Objectives: 1. To recognize sports literature as a distinct literary genre; 2. to examine the evolution of sports and its literature; 3. to address and discuss stereotypes in sports; 4. to analyze the effect of sports on human nature and society; 5. to evaluate the literary qualities and style of sports literature; 6. to explore the appeal and impact of sports and its literature on society

Description: This course will focus on both fiction and nonfiction sports literature. Students will read thematically related articles, explore issues on the Internet, and scrutinize the genre in popular culture. Students will study and research specific sports-related topics such as rivalries, Pittsburgh sports, and the Olympics. Through writing, online exchanges, and classroom discussions and presentations, students will share their findings and viewpoints regarding this genre. Students are required to read one sports-related novel in addition to shorter works of literature and non-fiction texts which enhance their understanding about the genre.

8910 CHS ARGUMENT, COMMUNICATION AND RHETORIC
(This is a College in High School course from the University of Pittsburgh worth 3 College Credits)
Grade 11 or 12
1 Credit/2 Trimesters



Prerequisite: None

Objectives: 1. To examine and apply formal argumentation concepts; 2. To create and express sound arguments, backed by research, to support a point of view; To effectively and ethically counter arguments presented by opponents; To develop and practice the artful use of language/rhetorical devices; To reach unbiased, critical judgments when assessing competing arguments in a debate context.

Description: This College In High School course (available for three University of Pittsburgh credits) teaches students to recognize, explain, research, construct, present and critique arguments. Assignments invite students to create their own research-based arguments, express them capably to peers and instructors, eloquently refute competing arguments, and judge the soundness of arguments made by others. Students will also explore and utilize key concepts of argumentation theory as a means to enhance their argument skills in a variety of both oral and written activities that feature lively intellectual interchange. Classroom activities will include impromptu SPAR debates (i.e. spontaneous argumentation), Lincoln-Douglas debates, parliamentary debates, Socratic seminars, mock trial and other role-playing activities. Students will also complete a comprehensive midterm exam (focusing on argument theory) as well as collaborate with peers in conducting research for competitive, formal debates.

8108 MYTHOLOGY
Grades 11 - 12
.5 Credit/1 Trimester



Prerequisite: None

Objectives: 1. To explore various mythologies of the ancient and medieval world; 2. to relate classic mythology to modern cultural and artistic expression; 3. to understand mythology's influence on modern entertainment forms.

Description: The course will examine world mythology and its cultural influence over the years. It will explore various mythologies produced by ancient societies in an effort to explain the world and the meaning of human existence. It will study major themes of mythology. The course will make use of modern media as well as written literature.

Expectations: Students will gain an understanding of how mythology has profoundly influenced not only literature but also heavily impacted on art, literary criticism, music, psychology, religion, cinema, and television. By exploring the influence of mythology on modern entertainment forms, the student will recognize how cultural identities are still shaped by timeless tales penned by some of the world's greatest writers.

8113 CREATIVE WRITING
Grades 9-12
.5 Credit/1 Trimester

Prerequisite: None.

Objectives: 1. To experiment with a variety of written and oral expression; 2. to develop their own voices and style in writing; 3. to practice the process of writing from prewriting through editing; 4. to practice techniques for evaluating the writing of others; 5. to share written work by publishing in the school literary magazine, *Bittersweet*, and other outside sources.

Description: This course focuses on generating free writing in a journal, studying models of good writing, and experimenting with poetry and prose. Students will develop a sense of speaker and audience. They will provide positive support for their fellow writers and learn to revise their work using concrete, sensory details and appropriate choice of diction, syntax, purpose, and audience. Students will also learn techniques for evaluating syntax, tone, purpose, and audience and will learn techniques for evaluating writing. These techniques will be used to evaluate submissions for the school literary magazine, *Bittersweet*, which is a co-curricular activity. Therefore, students taking this class may also choose to become a part of the *Bittersweet* staff, although participation is not required for the course.

8123 ADVANCED CREATIVE WRITING

Grade 12

.5 Credit/1 Trimester

Prerequisite: Creative Writing

Objectives: 1. Students will study figurative language in context and explore an author's use and purpose of figurative language 2. Students will study voice, style, tone, audience, and syntax in both their own writing as well as others' writing.

Description: This course will focus on students' written expression both in poetry and prose. Students will read a variety of writing including authors such as Poe, Chaucer, Alighieri, Dickinson, and Homer. Students will write to emulate these authors as well as develop their own style and voice.

Expectations: Students are expected to write daily. Students will write both poetry and short prose. Students will be expected to analyze poems and prose and discuss their literary value. Students are expected to share their work with the class and submit to *Bittersweet*.

8115 LITERATURE ON THE STAGE THEATER I

Grades 9 - 12

.5 Credit/1 Trimester

Prerequisite: None

Objectives: 1. To introduce students to a variety of dramatic works in order to examine an actor's use of critical thinking and presentation skills in accordance to a genre of theatre; 2. to examine and practice aspects of play production, e.g. blocking, costume design, use of set; 3. to analyze themes within a range of theatre works; 4. to build confidence, cooperation, and communication skills in preparing, performing and evaluating a production.

Description: Students will read and perform selections from various works of established playwrights. Students will analyze the use of language, space, movement, etc. in realizing a playwright's vision for the stage. Students will consider the actor's use of subtext as well as verbal and non-verbal communication skills in preparing and executing a performance. Furthermore, students will apply all class concepts to a live theatrical performance and analyze the chemistry between audience and cast. Finally, students will develop and apply 21st Century skills in creating a collaborative, original piece of theater in order to raise audience awareness on a particular social issue.

Expectations: The course will include examination, performance and even creation of literature for the stage. Students will be involved in both small and large group productions, designed not only to communicate literary aspects of the plays but also incorporate appropriate theatre exercises and methodology as a means to perform effectively. Students will write creatively to expand and apply knowledge of characterization technique. Students will also complete written analysis of established characters and themes. Quizzes and/or tests will check understanding and application of essential technical and performance elements in theater production.

8121 LITERATURE ON STAGE THEATER II

Grades 9 - 12

.5 Credit/1 Trimester

Prerequisite: None

Objectives: 1. To introduce students to various dramatic works in order to examine an actor's use of style as it is applied to a genre of theatre and the context of a historical time period; 2. to examine and practice aspects of play production, e.g. blocking, costume design, use of set; 3. to analyze themes within a range of theatre works and determine influences of different time periods; 4. to build confidence, cooperative skills, and critical thinking in preparing, performing and evaluating a production.

Description: Students will read and perform selections from playwrights of classic Greek theatre (i.e. comedy and tragedy) as well as more contemporary, established playwrights. Students will analyze the use of language, space, movement, etc. in realizing a playwright's vision for the stage. Students will also investigate and apply historical influences on a piece of dramatic text and collaborate in creating adaptations on stage. Students will experience a live theatrical performance in order to understand the chemistry between audience and cast.

Expectations: The course will include close readings of selected works. Students will be involved in both small and large group productions, designed not only to communicate literary aspects of the plays but also incorporate appropriate theatre exercises and methodology as a means to perform effectively. Students will also be expected to create original work for the stage based on our study of published work. Various writings will analyze characters, cultural elements, themes, etc. from the plays. Quizzes and tests might be used to check understanding of the theatre's place throughout different historical periods.

3115 LANGUAGE ARTS I

Grades 9 -10

1.0 Credit/2 Trimesters

Prerequisite: Placement in this course is pre-determined by testing data

Objectives: 1. To examine all dimensions of literacy; 2. to develop proficiency in word identification, spelling, vocabulary, grammar and usage, reading comprehension, speaking and writing

Description: This introductory course gains instructional power by integrating concepts and skills among its six steps. The words students learn to read and spell in a unit are the basis for vocabulary, grammar, and reading in other steps of the same unit. Once students can identify the words fluently, they can devote attention to learning complex vocabulary, mastering grammar and usage, developing reading comprehension and expanding composition skills. Students with reading delays will participate in the direct instruction and monitor their progress of fluency checks. Students will read in class and will develop confidence and skills needed reading.

3116 LANGUAGE ARTS II

Grades 9 - 10

1.0 Credits/2 Trimesters

Prerequisite: Placement in this course is pre-determined by testing data

Objectives: 1. To examine all dimensions of literacy; 2. to develop proficiency in word identification, spelling, vocabulary, grammar and usage, reading comprehension, speaking and writing

Description: This introductory course gains instructional power by integrating concepts and skills among its six steps. The words students learn to read and spell in a unit are the basis for vocabulary, grammar, and reading in other steps of the same unit. Once students can identify the words fluently, they can devote attention to learning complex vocabulary, mastering grammar and usage, developing reading comprehension and expanding composition skills. Students with reading delays will participate in the direct instruction and monitor their progress of fluency checks. Students will read in class and will develop confidence and skills needed reading.

3100 STANDARDS BASED READING

Grade 12

.5 Credit/1 Trimester (A or C)

Prerequisite: Basic or Below Basic Score on PSSA in 11th grade

Objectives: (1) To become proficient in reading comprehension and literary analysis, per the PA benchmarks. (2) To become lifelong critical readers.

Description: Students will build their vocabularies for discussing materials they read. They will actively read passages and answer exam-style multiple choice questions as well as open-ended ones. They will discuss elements of fiction (such as theme) and nonfiction (such as bias).

Expectations: Students are expected to complete all classroom work and may be expected to finish some reading assignments as homework. Students are also expected to retake the reading PSSA in October and/or the 3 local assessments in the spring to demonstrate proficiency.

Family and Consumer Sciences

The mission of the Family and Consumer Sciences program is to have individuals actively participate in the improvement of the quality of individual and family life in a changing society. Family and Consumer Sciences empowers individuals, strengthens families, and enables communities.

8701 FOODS I **Grades 9 - 12** **.5 Credit/1 Trimester**

Prerequisites: None

Objectives: 1. To become familiar with basic nutritional principles as related to the food pyramid; 2. to develop skills in planning nutritionally balanced meals; 3. to develop skills in the practical application of food preparation in a laboratory environment while utilizing a variety of equipment.

Description: The primary focus is on the practical application of food preparation and basic skills along with nutrition principles. Through the preparation and evaluation of tempting recipes, hands-on experience will be gained. The major units of study include knife skills, baking, potatoes, eggs, poultry, and pasta.

Expectations: Students will plan, select, and prepare food products that show an understanding of nutrition principles, preparation techniques, and equipment mastery.

8708 COOKING ESSENTIALS **Grades 9-12** **.5 Credit/1 Trimester**

Prerequisites: None

Objective: To learn the essential skills for preparing healthy meals at home.

Description This class will introduce the fundamentals of knife skills, food selection and storage, use of herbs and spices, baking, and other culinary concepts that will encourage home-cooked, healthy eating. Through readings, online research and hands on lab experiences students will be exposed to the essential techniques of cooking. Equipping students with the knowledge of proper preparation techniques and the know how to effectively flavor foods will promote healthy lifestyle choices associated with dining in.

Expectation: The students are responsible for contributing to and enhancing the units of study.

Computer Science

The demands of today's high-tech world require students to be computer literate. The challenge we have is preparing these students. Academics and technology must come together to meet and exceed this challenge.

The curriculum outlined will go beyond a basic understanding of computers. Technology changes constantly. Our students must be taught not only basic skills but also ways to adapt to those constant changes. Students will learn what a valuable tool the computer has become and the impact it will continue to have on our daily lives. From hardware to software, networks to desktops, programming to applications, students will be prepared for today's high-tech world.

Note: The following Computer Science Courses may be used in place of 1 full year math or science course for graduation: AP Computer Science Principles, AP Computer Science A (QVO), Intro to Computer Programming w/Java.

3706 INTRODUCTION TO NETWORKING

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: None.

Objectives: Students will acquire competencies to build, configure, upgrade and maintain a personal computer system. Utilizing relevant workplace safety and environmental standards during computer maintenance, students will provide computer hardware and software support by diagnosing and resolving hardware and software problems, and installing and configuring various computer peripheral devices. Students will also setup and maintain a local area network and resolve network connectivity problems using a systematic troubleshooting approach. At the end of this course students should possess the academic knowledge and skills aligned with CompTIA's A+ Certification standards.

Description: The course Introduction to Computers & Networking introduces a student to information technology and data communications. The course is designed to provide students with classroom and laboratory experience stressing laboratory safety and working effectively in a group environment. Students will learn how to build a computer and install and/or work with operating systems such as Windows 98, and Windows NT, 2000, and XP. This course is an introduction to information technology (IT) that includes an overview of IT, math for the digital age, introduction to networking, PC maintenance, safety and troubleshooting. An in-depth exposure to personal computer hardware and desktop operating systems including software will provide the students with knowledge and functionality of hardware and software components. The course will rely heavily on the Cisco Networking Academy's online curriculum (IT Essentials I: PC Hardware and Software) and assessment server. The understanding of how computers can be applied to academic and real world examples will be examined.

Expectations: Students will be required to explain and demonstrate basic computer operations, and pass all exams, quizzes, and laboratory projects. Students will keep a notebook throughout the course. The Blackboard™ Content Management System will be utilized to post course content, submit assignments and assess student learning through the use of online quizzes and/or exams.

3703 INTRODUCTION TO WEB DESIGN

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: None.

Objectives: The Introduction to Web Design course focuses on improving a students' understanding of the World Wide Web as they design, analyze, program and publish web pages in HTML (Hypertext Markup Language).

Description: The Introduction to Web Design explores web site basics with particular emphasis on the construction of web pages using an ordinary text editor to create and edit programming code. Hands-on web design exercises will be taught where the students will program web links, formatting page elements, add graphics and multimedia, work with frames and tables, and use forms to control input. Teacher directed lectures, hands-on laboratories and projects will comprise the majority of the lessons. Demonstrations and lectures will permit the students to construct a full functioning website and publish their product on the World Wide Web.

Expectations: Students will be expected to create and program a website in HTML as well as complete all lessons, pass exams/quizzes, projects, and submit a final course website which will integrate all HTML programming techniques. Students will keep a notebook throughout the course. The Blackboard™ Content Management System will be utilized to post course content, submit assignments and assess student learning through the use of online quizzes and/or exams.

3704 ADVANCED WEB DESIGN

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: None. However it is recommended that students complete 3703 Introduction to Web Design before enrolling in this course.

Objectives: The Advanced Web Design course explores the power of the World Wide Web by providing an intense classroom and laboratory experience in the following software packages: Adobe Dreamweaver, Fireworks and Flash. Students will design, analyze and publish their own websites like professionals.

Description: Advanced Web Design focuses on web site architecture with particular emphasis on design elements involving layout, navigation and interactivity. Hands-on web design exercises will be taught using Adobe Dreamweaver, Fireworks, and Flash. Teacher directed lectures, hands-on laboratories and projects will comprise the majority of the lessons. Demonstrations and lectures on the Adobe software packages will permit the students to construct a full functioning website and publish their product on the World Wide Web.

Expectations: Students will be expected to develop online content for a website they will create as well as complete all lessons, pass exams/quizzes, projects, and submit a final course website which will integrate all Adobe software products. Students will keep a notebook throughout the course. The Blackboard™ Content Management System will be utilized to post course content, submit assignments and assess student learning through the use of online quizzes and/or exams.

3711 INTRODUCTION TO JAVA PROGRAMMING

Grades 9 - 12

.5 Credits/1 Trimester



Prerequisite: None.

Objectives: 1. To introduce students to fundamental topics in computer science; 2. To develop and implement logic and analytical skills using the Java syntax; 3. To build a foundation of the basic concepts and methods of object-oriented programming and object-oriented design.

Description: This course will focus on the programming language of Java. Java enables the development of software that is reliable, secure, platform independent, dynamically adaptable and network enabled. Students will design, create/program and debug a variety of Java applications (stand-alone programs) and 'applets' (programs meant to execute within a web browser). The use of real world examples from business, science, engineering, mathematics and recreation will help illustrate the importance and complexity of an object-oriented programming language.

Expectations: Students will be required to maintain an electronic notebook consisting of all class and laboratory notes along with programming assignments. It is expected that every student will participate in individual and group programming projects, discussions, daily homework assignments and earn a passing grade on all assessments.

3712 INTRODUCTION TO COMPUTER PROGRAMMING WITH PYTHON

Grades 9-12

1.5 Credits/3 Trimesters



Prerequisite: None.

This course is designed for students with little or no prior experience with programming computers. The course has been developed in conjunction with Carnegie Mellon's School of Computer Science (CS1) and is a broad introduction to Computer Science within grades 9-12. Python is an easy-to learn, high-level computer language that is used in many computational courses and disciplines. Students will learn the basics and gradually harness the power of Python's more advanced features to make games and solve real-world problems. All students will have the opportunity to learn coding skills, programming, and computer science, in this fun and engaging course. The best way to learn to program is by doing; therefore students will be immersed in coding on the first day of class. Throughout the course, students will use graphics that are visually engaging, solve problems that allow for multiple correct solutions, and work through creative tasks that let students explore topics of interest.

4450 AP COMPUTER SCIENCE PRINCIPLES

Grades 10-12

1.5 Credits/3 Trimesters



Description: AP Computer Science Principles offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cyber security concerns, and computing impacts. AP Computer Science Principles will give students the opportunity to use technology to address real-world problems and build relevant solutions.

Mathematics

The mathematics curriculum at Quaker Valley High School approaches instruction through the integration of mathematics strands—algebra, geometry, data analysis, statistics, probability, and discrete math. Real-world applications are a central theme. Technology is an important instructional tool.

Graduation Requirements

All students must fulfill the district's graduation requirements of 4.5 credits of mathematics (equivalent to 3 years) in grades 9-12. This includes the successful completion of an Algebra I course at QVMS or QVHS. *Note: The following Computer Science Courses may be used in place of 1 full year math or science course for graduation: AP Computer Science Principles, AP Computer Science A (QVO), Intro to Computer Programming w/Java.*

Placement in Courses

In order to achieve and grow mathematically, it is crucial that students be placed in the appropriate course at the appropriate time. Care will be given to assure that students have the requisite skills for success in a particular course before enrollment is approved.

Placement or continuation in honors level courses will be based on:

1. Grades in previous math courses
2. Scores on standardized tests of aptitude and achievement in both mathematics and reading areas
3. Recommendation of the previous year's teacher

3405 ALGEBRA I

Grade 9

1.5 Credits/3 Trimesters

Prerequisite: None

Objectives: 1. To become proficient with multiple representations of linear functions (problem statement, formula, graph, spreadsheet); 2. to introduce students to basic non-linear functions; 3. To develop skills in writing and speaking about mathematics; 4. to acquaint students with mathematical technology.

Description: The Algebra I course focuses on linear functions and non-linear functions including quadratics and data analysis. The course stresses multiple representations for functions including written problem statements, formulas, graphs, and tables. The approach to teaching and learning includes cooperative and collaborative learning, mathematical modeling, use of scientific and graphing calculators, writing to learn mathematics, use of technology, student projects, and student presentations.

Expectations: Students are expected to complete classroom and daily homework assignments, to work cooperatively with other students, to present work to a group or the class as a whole, and to earn passing grades on assessments.

3420 COMPUTER ALGEBRA II

Grades 9 - 12

1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Computer Algebra.

Objectives: 1. To become proficient with multiple representations of quadratic functions, higher order polynomial functions, exponential functions, and radical functions; 2. to become proficient with the basic linear programming problems; 3. to become familiar with rational expressions; 4. to develop skills in writing and speaking about mathematics; 5. to acquaint students with mathematical technology.

Description: The main emphasis of Integrated Math II is advanced work with linear functions, quadratic functions, higher order polynomial functions, linear programming, exponential functions, radical functions, and some rational expressions. The course stresses multiple representations for functions including written problem statements, formulas, graphs, and tables. The approach to teaching and learning includes cooperative and collaborative learning, mathematical modeling, use of graphing calculators, use of computer tutors, writing to learn mathematics, student projects, and student presentations.

Expectations: Students are expected to complete classroom work and daily homework assignments, to work cooperatively with other students, to present work to a group or the class as a whole, to work approximately twice a week on a computer tutor, and to earn passing grades on assessments.

3421 ALGEBRA II
Grades 9 - 12
1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Geometry and proficiency in Algebra.

Objectives: 1. To become proficient in using algebraic expressions and functions; 2. To model real-world situations using algebra.

Description: Students will work with the language of algebra, equations, functions, matrices, powers and roots, relations, polynomials, and basic statistics. Integrated throughout the course is work with graphing, geometry, and calculators.

Expectations: Students are expected to complete classroom and daily homework assignments and to earn passing grades on tests and quizzes. It is recommended that students who plan to take Functions, Statistics, and Trigonometry earn a final grade of C or better.

4421 HONORS ALGEBRA II
Grade 9
1.5 Credit/3 Trimesters

Prerequisite: Successful completion of geometry and fulfillment of the honors requirement

Objectives: 1. To become proficient in using algebraic expressions and functions; 2. to model real-world situations using algebra.

Description: Students will work with the language of algebra, equations, functions, matrices, powers and roots, relations, polynomials, and basic statistics. Integrated throughout the course is work with graphing, geometry, and calculators. This course will be of greater scope and depth than the 3000 level course of the same name.

Expectations: Students are expected to complete classroom and daily homework assignments, journal entries and projects, and maintain a B average on tests and quizzes. Students who plan to take 4410 Honors Functions, Statistics, and Trigonometry must earn a final grade of B or better.

3409 GEOMETRY
Grades 9-12
1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Algebra I

Objectives: 1. To become proficient in working with geometric concepts; 2. to develop reasoning as an important aspect of mathematical thinking.

Description: Students will work with the language and logic of geometry, reflections, concepts of congruence and similarity, and two- and three-dimensional figures. There will be a focus on writing sequences of statements and on simple synthetic proofs. Work with coordinate and indirect proofs will also be discussed.

Expectations: Students are expected to complete classroom and daily homework assignments and projects and to earn passing grades on tests and quizzes. It is recommended that students who plan to take Advanced Algebra earn a final grade of C or better.

3407 COMPUTER GEOMETRY
Grades 9 - 12
1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Computer Algebra II.

Objectives: 1. To become proficient in working with geometric concepts; 2. to develop reasoning as an important aspect of mathematical thinking.

Description: Students will work with the language and logic of geometry, reflections, concepts of congruence and similarity, and two- and three-dimensional figures. There will be a focus on writing sequences of statements and on simple synthetic proofs. Work with coordinate and indirect proofs will also be discussed.

Expectations: Students are expected to complete classroom and daily homework assignments and projects and to earn passing grades on tests and quizzes. It is recommended that students who plan to take Advanced Algebra earn a final grade of C or better.

3411 FUNCTIONS, STATISTICS, AND TRIGONOMETRY

Grades 10 - 12

1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Algebra II

Objectives: 1. To become proficient in working with statistical, algebraic, and trigonometric concepts; 2. to acquaint students with available mathematics technology.

Description: Students will work with descriptive and inferential statistics, combinatorics, probability and exponential, logarithmic, and trigonometric functions. Algebraic and statistical concepts are integrated throughout, and the modeling of real phenomena is emphasized. Technology and real-world situations are major themes.

Expectations: Students are expected to complete classroom and daily homework assignments and to earn passing grades on tests and quizzes. It is recommended that students who plan to take 3412 Precalculus and Discrete Math earn a final grade of C or better.

4410 HONORS FUNCTIONS, STATISTICS, AND TRIGONOMETRY

Grades 9 - 10

1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Algebra II and fulfillment of the honors requirement.

Objectives: 1. To become proficient in working with statistical, algebraic, and trigonometric concepts; 2. to acquaint students with available mathematics technology.

Description: Students will work with descriptive and inferential statistics, combinatorics, probability, exponential and logarithmic, and trigonometric functions. Algebraic and statistical concepts are integrated throughout, and the modeling of real phenomena is emphasized. Technology and real-world situations are major themes. This course will be of greater scope and depth than the 3000 level course of the same name.

Expectations: Students are expected to complete classroom and daily homework assignments and projects and to maintain a B average on tests and quizzes. Students who plan to take 4408 Honors Precalculus must earn a final grade of B or better to qualify.

3413 PRECALCULUS

Grades 11 - 12

1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Functions, Statistics, and Trigonometry

Objectives: 1. To explore precalculus topics while maintaining and enhancing algebraic skills and developing mathematical thinking and reasoning at a high level; 2. To integrate technology throughout the course as a way to enhance concepts and deepen understanding. (A graphing calculator is necessary.)

Description: Precalculus topics include a review of the elementary functions (algebraic, polynomial, exponential, logarithmic, trigonometric), advanced properties of functions, exposure to special functions (inverse trigonometric, parametric, polar, vector), and introductions to limits, the derivative, and the integral. Evaluation of complex expressions, not emphasized in previous courses, will be emphasized. Mathematical thinking, reasoning, and justification are unifying themes employed throughout the course.

Expectations: Students are expected to complete classroom and daily homework assignments and to earn passing grades on tests and quizzes. It is recommended that students who plan to take 8913 CHS Calculus earn a final grade of C or better to qualify and teacher recommendation. (Note: this is not the prerequisite course for AP Calculus.)

4408 HONORS PRECALCULUS

Grades 10 - 12

1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Functions, Statistics, and Trigonometry, fulfillment of the honors requirement, and teacher recommendation.

Objectives: 1. To explore precalculus topics while maintaining and enhancing algebraic skills and developing mathematical thinking and reasoning at a high level; 2. To include elements of calculus, where appropriate, by supplementing the material in the textbook; 3. To integrate technology throughout the course as a way to enhance concepts and deepen understanding. (A graphing calculator is necessary.)

Description: Precalculus topics include a review of the elementary functions (algebraic, polynomial, exponential, logarithmic, trigonometric), further exploration of advanced functions (inverse trigonometric, parametric, polar, vector), and introductions to limits,

the derivative, and the integral. Evaluation of complex expressions, not emphasized in previous courses, will be emphasized. Mathematical thinking and justification, including specific attention to formal proof and comparing structures, are unifying themes employed throughout the course. Further focus will be placed on moving fluidly from one representation of a function to another (algebraic, visual, numeric, verbal). This course will be of greater scope and depth and will move at a faster pace with a higher degree of rigor than the 3000 level course of the same name.

Expectations: Students are expected to complete classroom and daily homework assignments and to maintain a B average on tests and quizzes. Students who plan to take 4412 AP Calculus AB or 4415 AP Calculus BC must earn a final grade of B or better to qualify and teacher recommendation.

4412 AP CALCULUS (AB)

Grades 11-12

1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Precalculus, fulfillment of the honors requirement, and teacher recommendation.

Objectives: 1. To develop an understanding of first semester college calculus; 2. to provide experience with the methods and applications of first semester calculus.

Description: This course emphasizes a multi-representational approach to first semester college calculus with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations are also important. Students will study topics including analysis of graphs, limits, continuity, computations of derivatives, applications of derivatives, Riemann sums, anti-derivatives, methods of integration, properties and applications of integrals, and the Fundamental Theorem of Calculus. The course will closely follow the AB syllabus put forth by the College Board. Additional topics may be added as time permits.

Expectations: Students are expected to complete a summer packet prior to taking AP Calculus. Students are also expected to complete classroom and daily homework assignments, participate actively in class, and thoroughly prepare for rigorous quizzes and tests. Students are required to take the AP Calculus exam given in May.

4415 AP CALCULUS (BC)

Grades 11-12

1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Precalculus, fulfillment of the honors requirement, and teacher recommendation.

Objectives: 1. To develop an understanding of first and second semester college calculus; 2. To provide experience with the methods and applications of first and second semester calculus.

Description: This course emphasizes a multi-representational approach to first and second semester college calculus with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations are also important. Students will study topics including analysis of graphs, limits, continuity, computations of derivatives, applications of derivatives, Riemann sums, anti-derivatives, methods of integration, properties and applications of integrals, the Fundamental Theorem of Calculus, and infinite sequences & series. The course will closely follow the BC syllabus put forth by the College Board. Additional topics may be added as time permits. The pace and rigor of AP Calculus (BC) will be substantially greater than that of its (AB) counterpart.

Expectations: Students are expected to complete a summer packet prior to taking AP Calculus. Students are also expected to complete classroom and daily homework assignments, participate actively in class, and thoroughly prepare for rigorous quizzes and tests. Students are required to take the AP Calculus exam given in May.

8913 CHS CALCULUS (This is a College in High School course. See page vi for possible course costs.)

Grades 11 - 12

1.5 Credits or 4 College Credits/3 Trimesters

Prerequisite: Successful completion of Precalculus.

Objectives: 1. To develop an understanding of calculus; 2. to provide experience with the methods and applications of calculus.

Description: This course produces an introduction to calculus for students interested in business, economics, and other Social Studies. Students will study topics including functions, limits and continuity, differentiation, applications of differentiation, integration, exponential, logarithmic functions, arithmetic and geometric progressions, and an introduction to multi-variable calculus.

Expectations: Students are expected to complete classroom and daily assignments and to earn passing grades on tests and quizzes. Students must also meet the requirements as outlined by the College in High School program.

8405 STATISTICS
Grades 10 - 12
1.5 Credit/3 Trimesters

Prerequisite: Successful completion of Algebra II or Integrated Math II

Objectives: 1. To become proficient in determining mathematical and experimental probabilities; 2. to become proficient with descriptive statistics; 3. to develop skills regarding data collection; 4. to acquaint students with appropriate statistical technology tools.

Description: The main focus of the course will be exploring data, planning a study, producing models using probability theory, and making statistical inferences. Students will work with statistical measures of centrality and spread, methods of data collection methods of determining probability, binomial and normal distributions, hypothesis testing, and confidence intervals. Students will use multiple representations to present data including written descriptions, numerical statistics, formulas and graphs.

Expectations: Students are expected to complete classroom and daily homework assignments and to earn passing grades on assessments. Students will be expected to work in groups cooperatively and collaboratively. They will be expected to present work to the teacher, small groups, and the whole class.

Music

Music, an academic; music, an art. Music incorporates aspects of mathematics, physics, physical education, history, and world languages. Beyond these, though, music is an art. It allows for aesthetic growth for all who perform and listen.

It is our aim to expose all students to a wide variety of musical styles and periods. For the performing ensembles we want the students to experience the coordination of this music through a variety of performances in both small and large ensembles and through the preparation of those performances. Band, orchestra, and chorus are co-curricular courses and have requirements that extend beyond the normal school day. Furthermore, the curriculum offers opportunities for all students in Music Theory and piano courses.

8799 HONORS BAND Grades 9 - 12 1.5 Credits/3 Trimesters



Prerequisite: Current member of the band program or audition by the conductor

Objectives: To provide the opportunity for each student to: 1. participate in a music program that reflects the continuing advancements in music/education; 2. sequentially develop the comprehensive cognitive and physical skills requisite for refining ensemble technique and tone in performing; 3. sequentially develop comprehensive music literacy by refining music reading, listening, and analysis; 4. value music; 5. sequentially develop the affective concepts requisite for refining aesthetic perception and response; 6. foster creativity; 7. provide exposure to our cultural heritage reflecting music history and style in performing; 8. nurture the student from childhood through transition into young adulthood by developing his/her sense of self-worth, sense of community, role in understanding and contributing to our culture and aesthetic sensitivity; 9. promote a lifetime association with music as a professional, as an avocation, and/or a discriminating listener/consumer.

Description: Class meets five times per week. Students will be taught proper instrumental and ensemble technique. Emphasis is placed on the development of musicianship through progressive technical studies, the development of tone quality, phrasing, articulation, all major and minor scales, rhythmic patterns, meters, trills, and embellishments, and music reading skills. Emphasis is on age-appropriate musicianship/aesthetic response including rehearsal and concert etiquette, and responsibilities associated with membership in a performing organization. The repertoire for marching band and concert band will consist of traditional and contemporary literature, including transcriptions, marches, and show music. The students will rehearse a large variety of music and prepare selected pieces for performance and adjudication.

Expectations: This course will include both components of marching and concert band. Extra rehearsals and performances are a vital and integral part of this course and are part of the course requirements and grading policy.

8798 CONCERT BAND Grades 9-12 1.5 Credit/3 Trimesters



(same as above however students who choose this course will not be part of the marching band program and will not receive honors credit)

8802 STRING ORCHESTRA Grades 9 - 12 1.5 Credit/3 Trimesters



Prerequisite: Current member of the orchestra program or audition by the conductor

Objectives: To provide the opportunity for each student to: 1. participate in a music program that reflects the continuing advancements in music/education; 2. sequentially develop the comprehensive cognitive and physical skills requisite for refining ensemble technique and tone in performing; 3. sequentially develop comprehensive music literacy by refining music reading, listening, and analysis; 4. value music; 5. sequentially develop the affective concepts requisite for refining aesthetic perception and response; 6. foster creativity; 7. provide exposure to our cultural heritage reflecting music history and style in performing; 8. nurture the student from childhood into young adulthood by developing his/her sense of self-worth, sense of community, role in understanding and contributing to our culture and aesthetic sensitivity; 9. promote a lifetime association with music as a professional, as an avocation, and/or a discriminating listener/consumer.

Description: Class meets five times per week. Students will be taught proper instrumental and ensemble technique. Emphasis is placed on the development of musicianship through progressive technical studies, the development of tone quality, phrasing, articulation, all major and minor scales, rhythmic patterns, meters, trills, and embellishments, and music reading skills. Emphasis is on age-appropriate musicianship/aesthetic response including rehearsal and concert etiquette, and responsibilities associated with

membership in a performing organization. The repertoire will consist of traditional and contemporary literature for string orchestra. The students will rehearse a large variety of music and prepare selected pieces for performance and adjudication.

Expectations: Students join all performing groups with the understanding that performances outside of the regular school day constitute a part of their grade/evaluation. Extra rehearsals and performances are a vital and integral part of this course and are part of the course requirements and grading policy.

8803 CONCERT CHOIR

Grades 9 - 12

1.5 Credits/3 Trimesters



Prerequisite: Recommendation of instructor and/or satisfactory audition with the director

Objectives: To provide the opportunity for each student to: 1. participate in a music program that reflects the continuing advancements in music/education; 2. sequentially develop the comprehensive cognitive and physical skills requisite for refining ensemble technique and tone performing; 3. sequentially develop comprehensive music literacy by refining music reading, listening, and analysis; 4. value music; 5. sequentially develop the affective concepts requisite for refining aesthetic perception and response; 6. foster creativity; 7. be exposed to our cultural heritage reflecting music history and style in performing; 8. be nurtured the student from childhood through transition into young adulthood by developing his/her sense of self-worth, sense of community, role in understanding and contributing to our culture, and aesthetic sensitivity; 9. develop a lifetime association with music as a professional, as an avocation, and/or a discriminating listener/consumer.

Description: Class meets five times per week. Students will be taught emphasizing proper vocal technique, ensemble technique, and music reading skills. Emphasis is on age-appropriate musicianship/aesthetic response including rehearsal and concert etiquette, and responsibilities associated with membership in a performing organization. Repertoire consists of traditional and contemporary literature of various vocal genres.

Expectations: Students join all performing groups with the understanding that performances outside of the regular school day constitute a part of their grade/evaluation. It is expected that students will take this class all three terms. Special considerations for two terms only need to be approved by the Choral Director.

8823 COMPREHENSIVE MUSICIANSHIP

Grades 9-12

.5 credits/1 Trimester



Description: Comprehensive Musicianship is a one-term course designed for all students who would like to expand their knowledge of fundamental music concepts. The curriculum covers basic to intermediate concepts within all aspects of music theory. Topics include music-reading skills, rhythm, scales, keys, harmony, melody writing/song writing and arranging. Comprehensive Musicianship may be taken as its own course, or as the mandatory prerequisite for AP Music Theory.

8808 KEYBOARD LAB

Grades 9 - 12

.5 Credit per Trimester



Prerequisite: None

Objectives: 1. To provide instruction in beginning, intermediate, and advanced piano skills; 2. to provide introductory experiences in music technology.

Description: This class will meet five times per week for one term. During each term the students enrolled will be individually evaluated and provided with instructional sequences that advance their individual needs. Individual practice as well as computer assisted instruction will be utilized.

Expectations: Students will advance through instruction at their level and will be evaluated by their daily work and progress on the keyboards. **NOTE: Students may enroll in this class more than once during the school year.**

8824 PARTNERS MUSIC

Grades 9-12

0.5 Credit per Trimester



Students enrolled in this course will be working on different aspects of music with a focus on music for the diverse learner. This course will expand on Best Buddies relationships and will focus on using those relationships to make music. This course will include working on learning how to play basic piano, singing, performing as a group, and learning music through movement (Eurhythmics), along with other aspects of general music.

4822 AP MUSIC THEORY
Grades 11-12
1.0 Credits/2 Trimesters



Prerequisite: Students must successfully pass both the “Comprehensive Musicianship” course as well as the summer work packet. Students who wish to study music theory at the collegiate level should possess the ability to read and play musical notation and be proficient at a high school level as a vocalist or instrumental. Students who do not have a primary instrument or voice part and/or cannot read music notation are not recommended for AP Music Theory under most circumstances.

Description: Advanced Placement Music Theory is designed to fully develop the student’s ability to recognize, understand, describe and implement the materials and processes of music that are heard or presented in a score. The course will instill mastery of the elements of music, including intervals, scales, chords, rhythmic patterns, and the terms used to describe these elements as they relate to the Western tonal music system. Students will explore sophisticated harmonization techniques and analytical techniques, sight- singing and keyboard skills, and advanced compositional techniques. AP Music Theory encompasses topics of study and activities typical of the first two years of undergraduate music study and is appropriate for advanced musicians.

Physical Education/Wellness

The goal of physical education/wellness education is to promote individual development of the knowledge, skills, behaviors and attitudes associated with regular participation in physical activity, physical fitness, and health wellness.

8005 HEALTH & WELLNESS I **Grades 9 or 10** **.5 Credit/1 Trimester**

Prerequisite: None

Objectives: 1. To help students develop the knowledge and skills needed to make healthy choices to improve their quality of life; 2. to understand healthy personality development and healthy relationships; 3. to develop knowledge, understanding, and avoidance of risky behaviors that lead to violence, substance abuse, teenage pregnancy and sexually transmitted diseases.

Description: This course is an extension of the middle school program with a more sophisticated approach and the addition of several new areas of study. At the high school level, individual responsibility for health and wellness is stressed. Students learn that many health-related problems are preventable by making healthy choices throughout life.

Expectations: All students will be expected to participate in classroom activities and be assessed by performance on tests, quizzes, assignments, and research projects. Students will be expected to attain a level of wellness understanding that meets the course objectives. Students who fail to pass the course will be required to repeat it.

8006 HEALTH & WELLNESS II **Grades 11 or 12** **.5 Credit/1 Trimester**

Prerequisite: Health and Wellness I

Objectives: 1. To help students utilize the knowledge and skills to make healthy choices that improve their quality of life; 2. to help students apply health knowledge to their own lives; 3. to recognize abusive relationships, sexually harassing behaviors, and dating violence; 4. to develop knowledge, understanding, and avoidance of risky behaviors that lead to substance abuse, suicide, and HIV/AIDS transmissions.

Description: This course is an extension of the Health and Wellness I course with the addition of several new areas of health-related study relevant to adolescents. Individual responsibility for health and wellness continues to be emphasized. In this course students focus on applying knowledge to personal and social health issues including sexual harassment, date rape, HIV/AIDS, suicide prevention, stress management, and the effects of chemical addictions on the family. In addition, students will have the opportunity to become certified in adult CPR.

Expectations: All students will be expected to participate in classroom activities and be assessed by performance on in-class assignments, tests, quizzes, and research projects. Students will be expected to attain a level of wellness understanding that meets the course objectives. Students who fail to pass the course will be required to repeat it.

80010 PHYSICAL EDUCATION & FITNESS **Grades 9 - 12** **.5 Credit/1 Trimester**

Prerequisite: None

Objectives: 1. To demonstrate individual knowledge of and development in health-related physical fitness; 2. to develop and refine skills in a wide variety of physical activities; 3. to demonstrate leadership skills in small group and large group activities; 4. to demonstrate safety, sportsmanship, fair play, cooperation, and respect for others during physical activity; 5. to demonstrate knowledge of basic skills, principles, rules and strategies related to a variety of physical activities and movement forms; 6. to demonstrate knowledge of how to learn new skills.

Description: The physical education program at this level builds on the elementary and middle school programs with more emphasis on the development of advanced techniques, strategies, and greater competence in performing a variety of physical activities. Cooperation, sportsmanship, safety, and fair play are stressed throughout the program. The program includes a variety of team, large group, small group, dual and individual physical activities. In addition, health-related physical fitness is stressed which focuses on assessing, analyzing, and improving cardiovascular endurance, muscular strength, muscular endurance, flexibility, and body composition.

Expectations: All students are expected to dress appropriately for safe participation in physical activity and participate in all class activities. Students will be expected to perform physical skills demonstrating proper technique at a level that is commensurate with their abilities. Students will demonstrate their level of knowledge, attitudes, and skill through a variety of written and performance-based assessments. Students will be expected to work individually, in pairs and in small and large groups throughout the course. Students will demonstrate their knowledge and application of principles relating to improving health related physical fitness. Students who fail to pass the course will be required to repeat it.

80020 INDEPENDENT PHYSICAL EDUCATION

Grades 10-12

.5 Credits/1 Trimester

Prerequisite: One trimester of Physical Education & Fitness in school.

Objective: Students will demonstrate the advanced knowledge of physical education and fitness by engaging in physical activity independently of the in-school program. Students taking this course will be able to demonstrate the fundamentals of health-related physical fitness through independent activity and research.

Description: The independent physical education program at this level is intended for students looking to achieve a higher understanding and more independent education. Students will briefly meet with the instructor to ensure proper completion of the course, but the majority of the course work will be submitted electronically. Achieving health-enhancing levels of physical activity and physical fitness are stressed by completing daily activity logs, weekly reflections, bi-monthly extended response questions, a self-assessment and a final personal project.

Expectations: Students are expected to engage in daily physical activity, following the guidelines set forth by the course instructor. Students will work independently on their physical activity during off-school hours to get the required amount of exercise. Physical activity hours are logged via online tools daily and checked by the instructor daily. As a supplement to the physical activity logging, students will also complete weekly prompts, focusing on the effects of physical activity and nutrition on the human body. Lastly, students will also be tested on physical activity principles and create a final project, showing their gained knowledge of how to structure an appropriate exercise program.

80030 PARTNERS PHYSICAL EDUCATION

Grades 10-12

.5 Credits/Trimester

Prerequisite: Application; Teacher Recommendation

NOTE: This course can either be taken as a Teacher Assistant elective or to fulfill PE requirements.

Description: Students with physical or cognitive disabilities benefit from partnering with peers. Therefore, this physical education course is designed for students to work together to fulfill the mental, physical and social needs of all individuals in a less restrictive environment. The focus of this course will be on individual skill development, fitness, and movement. Activities will be designed with consideration for various student ability levels. Collaboration is encouraged through student pairs or groups working alongside each other. The goal of this class is to foster skill development, fitness and fun for all.

Pre-Engineering Technology

Pre-Engineering Technology courses enable students to: become technologically literate through exploration of the social and cultural impacts of technology; apply concepts from math, science, social studies, art and language arts; analyze and develop solutions to practical problems; and to implement a variety of instructional strategies including teamwork, simulations, computer modeling, prototyping and research and design.

***Pre-Engineering Technology classes also count as Science credit.**

86011 TECHNOLOGY AND ENGINEERING FUNDAMENTALS

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: None

Objectives: 1. To apply problem solving and creative thinking through activities and experiences; 2. to demonstrate a general understanding of the five areas of technology: manufacturing, construction, communications, transportation, and bio-related technologies; 3. to integrate technological concepts with other school subjects, such as math, science, English, and social studies; 4. to encourage students to produce high quality work, individually and as part of cooperative research and development teams; 5. to understand the safe use of tools, machines, and processes of technology.

Description: Technology and Engineering Fundamentals is a foundation course in technology for all students in grades 9 through 12. This exciting, hands-on course provides an overview of the systems areas of bio-related, communication, construction, manufacturing and

transportation technology. Students, working alone or in groups, will build a foundation for technological literacy by developing, producing, testing and assessing solutions to technological problems. Also, the impacts of technology will be analyzed. Exploring Technology is a prerequisite for many of the other technology courses offered at Quaker Valley High School.

Expectations: Students will complete all assignments and participate in class project activities.

8602 ROBOTICS

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: Technology and Engineering Fundamentals

Objectives: 1. Identify, formulate solutions for, and solve engineering technology problems using engineering design processes 2. Apply knowledge of mathematics, science and technology to solve robotic engineering technology problems. 3. Function on multi-disciplinary teams 4. Communicate effectively using various forms of communications. 5. Recognize the need for, and demonstrate the ability to, engage in life-long learning 6. Describe various methods used to manage and schedule projects 7. Participate in and/or conduct design reviews 8. Collect, analyze and interpret data

Description: This course is designed to use robotics as the organizer to teach engineering design process and programming. Robotics consists of an eclectic mix of mechanics, electronics, programming, engineering, and mathematics. The curriculum is divided into two sections: "Getting Started" and "Programming and Engineering." A comprehensive guide teaches students how to program the VEX Cortex Hardware System as it helps students develop engineering competencies. Students learn at different rates and the curriculum is designed so that students are able to work independently through the lessons.

8603 TRANSPORTATION TECHNOLOGY

Grades 9 - 12

.5 Credit/1 Trimester



Prerequisite: Technology and Engineering Fundamentals

Objectives: 1. To demonstrate an understanding of the operation of various transportation systems; 2. to develop, produce, test, and evaluate various transportation vehicles; 3. to investigate the various subsystems of transportation; 4. to investigate the history and future of transportation; 5. to analyze various transportation systems for efficiency; 6. to investigate the social, cultural, economic, and environmental impacts of transportation systems; 7. to work cooperatively as a group to problem solve transportation challenges; 8. to integrate various math and science concepts into a design challenge.

Description: In Transportation Technology, students will develop a basic understanding of transportation technology. In problem solving activities, students will develop, produce, use and assess transportation vehicles and systems while studying the technical subsystems of propulsion, structure, suspension, guidance, control and support in land, water, air and space environments.

Expectations: Students will complete all assignments and participate in class project activities.

8604 COMPUTER-AIDED DRAFTING AND DESIGN (CADD)

Grades 9 - 12

.5 Credit/1 Trimesters



Prerequisite: Technology and Engineering Fundamentals

Objectives: 1. To demonstrate an understanding of the operation of computer-aided drafting and design software; 2. to develop problem solving skills that are applicable to life and work; 3. to communicate design ideas effectively; 4. to apply math and science concepts to designing; 5. to demonstrate professional responsibility within the classroom.

Description: In Computer-Aided Drafting and Design (CADD) students will learn to use drafting and design computer software programs and apply them to a variety of drawing and design situations. After a computer hardware/software orientation, students will learn to read and draw several types of technical drawings. This information will then be applied in the design process as students work individually and in groups on a number of architectural and engineering design activities. Students will play the role of professional designers and planners who create design solutions to clients' problems.

Expectations: Students will complete all assignments and participate in class project activities.

8605 CONSTRUCTION TECHNOLOGY/STAGE DESIGN

Grades 9 - 12

.5 Credit per Trimester



Prerequisite: Technology and Engineering Fundamentals

Objectives: 1. To identify various methods, materials, and structures used in construction; 2. to develop, construct, use, and evaluate various structures and prototypes; 3. to produce structures using tools, materials, and production processes safely and efficiently; 4. to communicate designs using written specifications, two- and three-dimensional drawings and models; 5. to work cooperatively to problem solve design challenges; 6. to use science and mathematics to solve problems related to the design performance and analysis of structures; 7. to identify problems related to the design performance and analysis of structures; 8. to identify career opportunities in construction-related fields and their required educational preparation.

Description: In Construction Systems, students will develop a basic understanding of the behavior of constructed structures. In problem solving activities, students will develop, produce, use and assess structures while studying architectural design, structural engineering and community planning concepts. Students will then apply this knowledge in the design and hands-on construction of stage designs used for the drama musical at Quaker Valley High School. **NOTE: Students may enroll in this class more than once during the school year.**

Expectations: Students will complete all assignments and participate in class project activities.

Science

The primary goal of the science program is to provide quality science education and serve the educational needs of each student. Science education should create an environment where three significant factors are evident: A) place where students can enhance belief in self; B) a positive learning atmosphere; C) an environment which promotes both freedom and growth as an individual in an ever-changing society.

Graduation Requirements

All students must fulfill the district's graduation requirements of 4.5 credits of Science (equivalent to 3 years) in grades 9-12. This includes the successful completion of a Biology course. *Note: Tech Ed courses may also be used to fulfill part of the science/technology requirement. In addition, the following Computer Science Courses may be used in place of 1 full year math or science course for graduation: AP Computer Science Principles, AP Computer Science A (QVO), Intro to Computer Programming w/Java.*

Placement in Courses

Since math is an integral part of most higher level science courses, it is important that a student's mathematical ability be factored into any decisions regarding science placement. Courses at the 4000 level generally require high levels of both math and science proficiency.

At the 3000 level, a course is available in chemistry and physics for both the mathematically inclined and those who prefer a less mathematically based course. The latter is indicated as a "concept" course. All 3000 level courses are college preparatory in nature.

HONORS LEVEL REQUIREMENTS

Students wishing to be admitted to Honors Level Science courses will be evaluated based on the following criteria:

1. High level of performance in previous science and math course work
2. Recommendation of previous science teachers
3. Scores on standardized tests

3308 ENVIRONMENTAL BIOLOGY

Grade 9

1.5 Credit/3 Trimesters



Prerequisite: Successful completion of middle school science coursework. Students should be recommended by teachers if they will be required to take this course.

Objectives: 1. to examine living systems and basic environmental components; 2. to identify components of ecosystems and their interconnectedness; 3. to utilize the scientific method and apply scientific thinking to problem-solving; 4. to explore basic biological concepts and content; 5. to analyze common themes between the fields of environmental science, ecology, and biology.

Description: Environmental Biology is an entry-level science course that blends the fields of environmental science, ecology, and biology. Areas of emphasis concentrate on scientific thinking with related tools and technologies, ecological levels of organization in the biosphere, and interactions and relationships in an ecosystem. By understanding the natural processes that operate in the world, along with interactions between living and nonliving components in an ecosystem, students will explore the impact that humans have on the environment.

Expectations: Students will be required to complete assignments and participate in class and laboratory experiments, including those that require use of their laptop computer. They are expected to demonstrate and implement scientific and technological systems.

3307 PRINCIPLES OF BIOLOGY

Grade 10

1.5 Credit/3 Trimesters



Prerequisite: Successful completion of Environmental Biology. Students should be recommended by teachers if they will be required to take this course.

Description: Biology is the science of living things. This entry-level biology course emphasizes the following areas: plant and animal physiology, evolution biochemistry, cellular organization, DNA and genetics. Lab work will require students to display proficiency in the application of learning standards. Students taking this course will be expected to have already completed an environmentally-based life science course.

Objectives: 1. To examine living systems and their inter-relationship with the environment; 2. to identify structural characteristics of plants, animals, and ecosystems; 3. to describe functions of living systems; 4. to utilize laboratory methods and techniques to study biology; 5. to describe the cellular and molecular organization of life.

Expectations: Students will be required to complete assignments and participate in class and laboratory experiments. They are expected to construct models to demonstrate and implement scientific and technological systems.

3309 BIOLOGY
Grade 9
1.5 Credit/3 Trimesters



Prerequisite: Successful completion of chemistry and recommendation of science teacher

Objectives: 1. To examine living systems and their inter-relationship with the environment; 2. to identify structural characteristics of plants, animals, and ecosystems; 3. to describe functions of living systems; 4. to utilize laboratory methods and techniques to study biology; 5. to describe the cellular and molecular organization of life.

Description: Biology is the science of living things. This course, teaches the process, concepts, and excitement of biology and its importance in everyday life. Biochemistry, molecular and cellular organization, genetics, environmental studies and ecology, evolution, anatomy, and physiology of specific organisms are developed. Studies in all areas emphasizes the relationship between structure and function. Environmental issues, concepts, and human impact will be investigated. Laboratory experiences contribute significantly to the qualitative investigations.

Expectations: Students will be required to complete assignments and participate in class and laboratory experiments. They are expected to construct models to demonstrate and implement scientific and technological systems.

4309 HONORS BIOLOGY
Grade 9
1.5 Credits/3 Trimesters



Prerequisite: Students must receive a recommendation from a middle school science teacher, having demonstrated excellence in previous science coursework.

Objectives: 1. To examine the interdependency relationships between the biotic and abiotic; 2. to identify structural characteristics of plants, animals, and ecosystems; 3. to describe biochemical activities in organisms and overall functions of living systems; 4. to utilize laboratory methods and techniques in the study of biology; 5. to describe the cellular and molecular organization of life.

Description: Biology is the study of living things. This course is designed for the college preparatory student who has achieved at a higher level in previous science courses. Areas of emphasis are biochemistry, molecular and cellular organization, cell division, genetics, protein synthesis, evolution, environmental studies and ecology. Students demonstrate proficiency in the use of tools, processes, and resources of science and technology.

Expectations: Students will be required to complete assignments and participate in class and lab work, accessing a class website regularly. Independent and higher learning skills are required to construct models to demonstrate and implement scientific and technological systems.

3311 CHEMISTRY
Grades 9 and 10
1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Algebra I and science teacher recommendation

Objectives: 1. To acquaint students with the structure and composition of materials as they undergo changes in their chemical make-up; 2. to become familiar with the laws and theories of chemistry; 3. to collect and interpret data in the laboratory as well as learning basic lab techniques.

Description: The students will have a structured look at atomic theory and how it leads to chemical bonding. The course develops problem solving concepts of stoichiometry, thermochemistry, and kinetic theory as it applies to the physical states of matter. Students will gain an insight into different types of chemical reactions, states of matter, acid/base theory, equilibrium and electrochemistry.

Expectations: Students will be required to complete assignments and participate in class and laboratory experiments. They are expected to use mathematical concepts as they pertain to chemical theory and applications in the laboratory experiments.

3304 INTEGRATED PHYSICAL SCIENCE
Grade 10-12
1 Credit/2 Trimesters

Prerequisite: Successful completion of Algebra I, Environmental Biology and Principles of Biology

Objectives: 1. To acquaint students with the laws and theories of chemistry and physics; 2. to acquire skill and competence in laboratory techniques; 3. to explore the applications of chemistry and physics.

Description: This integrated physical science course is primarily developed for students who have completed Environmental Biology and Principles of Biology and are ready for a physical science course. This course is designed to emphasize the connections between chemistry and physics, to help students think analytically like scientists through scientific inquiry in a hands-on setting, and to provide a practical explanation of scientific phenomenon as it relates to their everyday lives, consequently shaping students' future career choices.

Expectations: Students are expected to complete homework assignments and participate in class and laboratory activities. They will build on scientific concepts and develop skill in laboratory procedures and safety.

3314 CONCEPT PHYSICS

Grades 11 - 12

1 Credit/2 Trimesters

Prerequisite: Successful completion of a chemistry course, Algebra I, and Geometry.

Objectives: To provide an understanding of physics in everyday life with concepts and insightful explanations for the non-science oriented students.

Description: Mechanics, sound, light, and electricity will be emphasized.

Expectations: Daily reading and review questions, chapter homework, and lab reports are expected.

3313 PHYSICS

Grades 11 - 12

1.5 Credits/3 Trimesters

Prerequisite: Successful completion of chemistry and mathematics through advanced algebra. Functions, Statistics, and Trigonometry should be taken concurrently with this course.

Objectives: 1. To prepare students to exist in an increasingly technological society; 2. to develop the students' analytical, problem solving, and laboratory skills; 3. to integrate math and science; 4. integrate computers and science within the context of the laboratory environment.

Description: Physics skills, mechanics, wave motion, light and static electricity are emphasized. Modern (atomic, nuclear, particle) physics may be introduced.

Expectations: Daily homework, periodic chapter homework, and lab reports are expected.

4315 HONORS RESEARCH SCIENCE

Grades 11 - 12

1 Credit/2 Trimesters



Prerequisite: Successful completion of Biology and Chemistry and recommendation of a science teacher

Objectives: 1. To describe the inter-relationship which exists between research, technology, and society; 2. to use primary resources to investigate research topics (e.g. periodicals, journals, Internet, and reports); 3. to distinguish between basic science and research technology; 4. to experience the dynamics of research and how it will impact on their lives in the future.

Description: This independent study course is designed for the junior or senior entering the field of science who has had above average achievement in previous science courses. This course emphasizes individual creativity, self-motivation, and achievement. The student involvement is through independent experimentation developed through both field and laboratory experiences. Research topics can be drawn from a variety of disciplines including botany, zoology, physiology, medicine, bio-chemistry, psychology, and environmental sciences.

Expectations: Students will design and implement a research plan for the resolution of a scientific issue. They will use appropriate science data correlation procedures and construct a well-formed research rationale and hypotheses. They will gather data and information through hands-on experiments and organize this data to draw valid conclusions. Extensive lab work will require an after-school commitment.

3318 ETHICS IN SCIENCE
Grades 11 - 12
.5 Credit/1 Trimester



Prerequisite: Successful completion of biology and chemistry courses.

Objectives: 1. To discuss, investigate, and evaluate the major ethical issues associated with the sciences, technology, and the medical professions; 2. to establish the role science plays in making ethical decisions; 3. to differentiate between ethics and science; 4. to apply logic and scientific evidence to support viewpoints of controversial issues (ex. euthanasia, abortion, environmental concerns).

Description: This class is designed for juniors and seniors interested in examining the ethical dilemmas associated with a range of scientific advancements (ex. stem cell research, cloning) as well as the medical profession, such as doctor-patient relationships. The impact of technology (from genetic engineering to rights of privacy) will be explored within all of these fields. Classic “could-should” conflict will be studied, paying particular attention to arguments from opposite viewpoints and to what the law states. An early emphasis will be placed on understanding the nature of ethics and how it fits into the fabric of society.

Expectations: Students will demonstrate an understanding of current biochemical, environmental, medical, and technological issues. The topics highlighted will require comprehension of cellular biology, genetics, environmental sustainability, and health care issues. The major focus of the class will be the expression of ideas/opinion/points of view through argument, discussion and debate, both formal and informal. Technological presentations as well as a variety of other project formats will also be expected, as examinations only play a portion of the role on grading. Class participation will be an integral part of the class, a research component, and reading in the sciences will most likely be required.

4310 HONORS CHEMISTRY
Grade 10
1.5 Credits/3 Trimesters

Prerequisite: Recommendation of the science teacher or the fulfillment of the honors requirement. Students should have completed or enrolled in Honors Algebra II or FST.

Objectives: 1. To acquaint students with scientific method of the ideals in chemistry; 2. to develop necessary skills for students to handle and manipulate materials and equipment in the collection of data; 3. to develop students' attitudes and curiosity with chemical phenomena.

Description: Chemical topics, which are developed, include work with chemical reactions, predictions and analysis related to unknown quantities, math relations, and molecular compositions of various chemical states. Mathematical interpretation will be emphasized through each chemical development. Time will be spent within the lab collecting and interpreting data as it applies to the lecture theory. Stoichiometric relations will be developed to predict products and product yield.

Expectations: Students will be required to relate lecture material to laboratory skills necessary to calculate results from the collection of data. Students will be called upon to demonstrate their writing and speaking knowledge of chemical values and reactions. Students will be required to prepare a topic on a specific field of chemistry.

4311 AP BIOLOGY
Grades 11-12
1.5 Credits/3 Trimesters



Prerequisite: Chemistry 4310 or 3311 and Biology 3309 or 4309 and teacher recommendation

Objectives: To develop: 1. cellular and molecular concepts and processes; 2. technological applications of biological principles; 3. interaction of biology, technology, and society; 4. understanding and use of biological methodology; 5. investigations of evolution as a unifying theme of biology; 6. relationship between structure and function in plant and animal systems.

Description: The Advanced Placement Biology course is designed to be the equivalent of a college biology course usually taken by biology majors during their first year of college. The course syllabus is adapted from Cornell University's introductory biology program. It aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing world of biology. The Advanced Placement Biology course is designed to be taken by students after the successful completion of a first course in high school biology and chemistry. Laboratory experience will require after-school or before-school sessions.

Expectations: Extensive homework and laboratory work are required. Students are expected to perform extensive readings in biology. Students will be required to take the AP Biology exam.

4312 AP CHEMISTRY
Grades 11 - 12
1.5 Credits/3 Trimesters

Prerequisite: Completion of Chemistry 3311 or 4310 and Advanced Algebra with a satisfactory grade or fulfillment of the honors requirement. Students should have completed or be enrolled in Functions, Statistics, and Trigonometry concurrently with this course. It is helpful if students have taken or are enrolled concurrently in Physics 3313.

Objectives: To develop the necessary skills for higher level thinking to solve mathematical problems in theory as well as in the lab experiments.

Description: Advanced Placement Chemistry is designed to be the equivalent of a college chemistry course for students majoring in engineering, pre-med, biology or related fields of study. Students attain a depth of understanding of fundamentals and reasonable competence in dealing with chemical problems. The course will also develop a background in organic chemistry helpful to students entering chemistry in college on the second level.

Expectations: Students are expected to complete daily assignments as well as the set-up of data collection and results in lab experiments. Students will be required to take the AP Chemistry exam.

4316 AP PHYSICS I
Grades 11 - 12
1.5 Credits/3 Trimesters

Prerequisite: Successful completion of Biology and Honors Chemistry and enrolled in or completed FST or having the recommendation of their teacher.

Objectives: 1. To prepare the student entering a physical science field 2. to extend the students' problem solving skills; 3. to improve the students' lab skills; 4. to integrate computers with science within the laboratory environment.

Description: Physics 1 is the 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 will also introduce electric circuits.

Expectations: Extensive homework and reading assignments, occasional lab reports. Students will be required to take the AP Physics exam.

4317 AP ENVIRONMENTAL SCIENCE
Grade 12
1.5 Credits/3 Terms



Prerequisite: Academic Biology or Honors Biology, Academic Chemistry or Honors Chemistry, Algebra I, and Algebra II, as well as a recommendation from a science teacher. It is also recommended, though not required, that students have taken (or be taking concurrently), a physics course and United States History.

Objectives: The goal of this interdisciplinary course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems (both natural and human-made), to evaluate the risks associated with these problems, and to examine alternative solutions for resolving or preventing them.

Description: The Advanced Placement Environmental Science course is designed to be the equivalent of an introductory college course in environmental science. The following six themes provide a foundation for the structure of the course: (1) Science is a process, (2) Energy conversions underline all ecological processes, (3) The Earth itself is one interconnected system, (4) Humans alter natural systems, (5) Environmental problems have a cultural and social context, and (6) Human survival depends on developing practices that will achieve sustainable systems. The exploration of these six themes will take form in each of the following key topics: earth systems and resources, the living world, population, land and water use, energy resources and consumption, pollution, and global change.

Expectations: Extensive homework and laboratory work are required. Technical skills are a must, as there will also be a strong digital portion of the course. In addition, students are expected to carry out extensive outside readings, as well as analyze multiple videos. All students enrolled in the course will be required to take the AP Environmental Science exam.

Social Studies

Social Studies assists students in acquiring, understanding and using information about historical and contemporary affairs.

Graduation Requirements

All students must fulfill the district's graduation requirements of 4.0 credits of Social Studies (equivalent to 3-4 years) in grades 9-12. This includes the successful completion of Global Civics, World History, and US History courses.

Placement in Courses

HONORS LEVEL REQUIREMENT

Admission to Honors Level History/Social Studies courses will be based on:

1. Grades in previous history/social studies courses
 2. Recommendation of the previous year's history/social studies teacher
 3. Under special circumstances, evaluation by social studies teachers of reading and analysis completed by the student in an essay format
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3208 GLOBAL CIVICS

Grade 9

1 Credit/2 Trimesters



Prerequisite: None

Objectives: 1. To develop global citizens who have a firm understanding of the United States government and its role globally; 2. To analyze and evaluate how human rights originated and are protected in the United States and globally; 3. To understand the causes of conflict and the strategies used by governments to resolve them; 4. To understand how issues impact local and global society; 5. To develop the skills of critical thinking, problem solving, communication and collaboration.

Description: The course will provide students with skills and competencies that lead to the development of global civic responsibility. It is an active and applied approach to civics education. Students will develop intellectual skills that help citizens identify, describe, explain, and analyze information and will enable them to evaluate, take, and defend positions on global issues. Students will develop participatory skills that enable citizens to monitor and influence civic life by working with others, expressing ideas, and managing conflict.

Expectations: Students will complete assigned readings, course assignments, projects, tests and quizzes. Students will actively participate in individual and group activities for the course using technology.

3210 WORLD HISTORY

Grade 10

1 Credit/2 Trimesters



Prerequisite: Successful completion of American Civics

Objectives: 1. To provide students with a solid historical background and the critical thinking skills necessary in understanding events which have shaped today's world; 2. Students will examine social, political, intellectual, and economic philosophies while gaining a greater appreciation for world diversity.

Description: The course will take a global approach to world studies, spanning European, Asian, and African histories. The time period of study will be from the Middle Ages to the modern times. Topics include: Medieval Europe, Byzantine, Islamic, Asian and African civilizations, the Renaissance and Reformation, Exploration and Colonization, the Enlightenment and French Revolution, the growth of European States, Nationalism, European Imperialism, the World Wars, Fascism, the Russian Revolution, and current issues.

Expectations: Students will be expected to actively participate in group activities, complete course assignments, exams, quizzes, and projects.

4210 HONORS WORLD HISTORY

Grade 10

1 Credit/2 Trimesters



Prerequisite: Successful completion of American Civics and fulfillment of the honors requirement

Objectives: 1. To provide students with a solid historical background and the critical thinking skills necessary in understanding events which have shaped today's world; 2. students will examine social, political, intellectual, and economic philosophies while gaining a greater appreciation for world diversity.

Description: Honors World History takes a global approach to world studies, beginning with the Middle Ages to modern times. Emphasizing place, time, and significance, these courses will show the continuity of history and the human condition, the sweeping forces that shaped events, and the influence of each era upon succeeding times. Because this is an honors course, there is greater emphasis on essay writing, oral presentations, and the use of challenging reading materials.

Expectations: Students will be expected to actively participate in group activities, complete course writing assignments, projects, exams, and quizzes. The students will successfully complete a project involving written research and a creative/oral presentation. The students will read books from a selected bibliography in addition to text; supplemental readings will be offered. Exams and assignments will be largely essay in nature and will include an analysis of historical writings.

4209 AP WORLD HISTORY

Grade 10

1.5 Credits/3 Trimesters



Prerequisite: An A average in Global Civics and teacher recommendation. As this is a writing intensive course, an Honors English background is highly recommended. This is a college level course.

Objectives: 1. To prepare students to successfully take the AP exam; 2. To adequately prepare students for a college level World History course.

Description: This world history survey course covers world history from approximately 8000 BCE through the modern era. The course gives students a greater understanding of the evolution of global societies in terms of political, religious, social, technological and economic development and emphasizes the interaction of these forces as well as the interaction of societies. It emphasizes relevant factual knowledge utilized in conjunction with analysis of major historical continuities and changes over time. Students analyze a wide variety of historical sources, including historiography arguments as well as primary and secondary sources.

Expectations: This is a writing intensive course. Students are expected to complete assigned summer work, including readings and essays, prior to the beginning of the course. In addition, they will fulfill requirements in the areas of readings, mock trials, simulations, writings, and testing. Students may expect to cover roughly one content chapter per week. Frequent writing assignments, including both analytical and creative writings, will be assigned and students are expected to write at a college level. **Students are required to take the AP World History exam.**

3211 U.S. HISTORY

Grade 11

1.0 Credit/2 Trimesters

Prerequisite: Successful completion of World History 3210

Objectives: 1. To extend students' awareness of the political, social, economic, and diplomatic history of the United States; 2. to develop an awareness of the relationship between past events and contemporary society.

Description: The major focus of the course is from the Spanish-American War to the present. The year is devoted to the 20th century. Students investigate the emergence of the United States as a world power, the various political developments faced by our democracy, the economic problems faced by changing conditions and the various social movements which have reshaped the basic fabric of American society.

Expectations: The students will develop a basic knowledge of America's past. Even more importantly, the students will analyze and interpret why historical decisions occurred and how they influence contemporary society.

4211 HONORS U.S. HISTORY

Grade 11

1.0 Credit/2 Trimesters

Prerequisite: Completion of World History 4210 and fulfillment of the honors requirement. As this is a writing intensive course, Honors English highly recommended.

Objectives: 1. To provide an intensive analysis of the causes, significance, and interrelation of historical events and culture. 2. To develop skills to interpret, contextualize, relate and think critically about historical writings and mass media at an honors level.

Description: The course provides an in-depth analysis of U.S. history from the Age of Imperialism to the present. Students will explore the major events, policy, and decisions thematically through a combination of intensive reading, lectures, Socratic discussion and problem-solving simulations. The students will learn to read historical materials analytically and critically, weighing historical evidence and interpretations and arriving at conclusions on the basis of informed judgment.

Expectations: Frequent writing assignments, including both analytical and creative writings, will be assigned; students are expected to write at an honors level. Students will be required to read and analyze a variety of primary source documents each week outside of class. In addition they will fulfill requirements in the areas of short journal entries, simulations, creative projects, and testing.

4212 AP U.S. HISTORY

Grades 11 - 12

1.5 Credit/3 Trimesters

Prerequisite: Successful completion of Honors World History and teacher recommendation. As this is a writing intensive course, Honors English highly recommended. This is a college level course.

Objectives: 1. To prepare students to successfully take the AP exam; 2. to adequately prepare students for a college level U.S. History course.

Description: The course gives students a thorough grounding of U.S. history from the early colonial period to the present as well as a framework for examining the context and significance of this history. The students learn to read historical materials analytically and critically, weighing historical evidence and interpretations and arriving at conclusions on the basis of informed judgment.

Expectations: This is a writing intensive course. Students are expected to complete assigned summer work, including readings and essays, prior to the beginning of the course. Students will read over one chapter per week as well as a wide variety of journal readings. In addition they will fulfill requirements in the areas of readings, simulations, writings, and testing. Frequent writing assignments, including both analytical and creative writings, will be assigned; students are expected to write at a college level. **Students are required to take the AP U.S. History exam.**

3213 ECONOMICS

Grade 12

.5 Credit/1 Trimester



Prerequisite: Successful completion of U.S. History 3211

Objectives: 1. To examine the role of the U.S. in the global economy; 2. to examine basic economic concepts and functions of the American system through the roles of the individual, businesses, and the government; 3. to develop personal responsibility for sound financial management and decision making. 4. to prepare students to be responsible, enterprising individuals who become entrepreneurial thinkers; 5. to build career competencies and skills desired by future employers.

Description: Economics introduces students to basic economics concepts; personal financial management and decision-making and the role of the United States in the international economy. In addition, students will have an opportunity to create and implement a concept, marketing strategy, and organizational design for a student-run business. They will learn the proper use of equipment necessary for the operation of the business. They will learn the enterprising skills related to creativity, initiative, problem solving, decision-making and customer service.

Expectations: Students will complete assigned readings from current publications, assignments, tests, and projects. Students will actively participate in all class and business activities. Students will be responsible for the daily operation, product selection, inventory, ordering and finances of the business. All profits from the business are used to fund the service projects selected by the class.

3207 CONTEMPORARY GLOBAL STUDIES

Grade 12

.5 Credit/1 Trimester



Prerequisite: Completion of Global Civics and World History

Objectives: 1. To understand and apply knowledge of how political systems influence the themes of the course. 2. To facilitate active citizenship through knowledge of how to affect change and take action. 3. To apply human, cultural, political and physical geographic competency. 4. To integrate and evaluate information from multiple sources and varying perspectives and communicate ideas effectively with diverse audiences. 5. To understand how human rights are gained, secured, and threatened.

Description: The course will explore contemporary global issues through the lens of three themes: Principles of Democracy, Scarcity and Abundance of Resources, and Conflict and Transformation. The course starts by defining citizenship and laying a political

framework through a comparison of world governmental systems and exploration of influential international organizations. Students will then explore the sources and results of current global issues through a variety of readings, multi-media projects, documentaries, debates, simulations, and speakers. The course focuses on increasing students' global literacy and global civic engagement.

Expectation: Students will complete assigned readings from current publications and scholarly sources, projects, tests, quizzes, and exams. Students will actively participate in debates, simulations, and discussion. Students will complete a global capstone project of a global issue of their choosing.

8211 INTRODUCTION TO PSYCHOLOGY

Grades 9 – 12

.5 Credit/1 Trimester



Prerequisite: None

Objectives: To gain a thorough understanding of psychological science from its' beginnings to present day. 2. To develop an understanding of the approaches and perspectives by which one can approach psychology. 3. To become familiar with the branches of psychology and their applications. 4. To apply knowledge gained in class to real-life situations.

Description: Introduction to Psychology provides an overview of current psychological research methods and theories. The primary areas of course study will follow the APA National Standards for High School Psychology including; psychological methods, biopsychology, cognitive psychology, developmental psychology, social psychology, and abnormal psychology. Students will explore core psychological concepts such as, biological bases of behavior, motivation, life span development, personality, cognition, learning, memory, psychological disorders/treatments, and social and cultural dimensions of behavior.

Expectations: Students are expected to participate regularly in class, complete all lab assignments, applications papers, homework assignments, and also to prepare diligently for all quizzes and exams.

4350 AP PSYCHOLOGY

Grades 11-12

1 Credit/2 Trimesters



Prerequisite: Successful completion of Introduction to Psychology and teacher recommendation.

Objectives: To gain a thorough understanding of psychological science from its beginnings to present day; To develop an understanding of the approaches and perspectives by which one can approach psychology; To become familiar with the branches of psychology and their applications; To apply knowledge gained in class to real-life situations.

Description: The AP Psychology course is designed to be the equivalent of a college psychology course and 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. Students will also learn about the ethics and methods psychologists use in their science and practice. The primary areas of course study will follow the APA National Standards for High School Psychology including; psychological methods, biopsychology, cognitive psychology, developmental psychology, social psychology, and abnormal psychology.

Expectations: Extensive homework, reading, and writing are required. Students are required to take the AP Psychology exam.

8220 CRIMINAL AND CIVIL LAW

Grades 9-12

.5 Credit/1 Trimester



Prerequisite: None

Objectives: 1.) To develop an understanding of the rights of citizens, with an emphasis on the rights of minors. 2.) To develop an understand of criminal and civil court procedures. 3.) To analyze how Pennsylvania school law impacts students. 4.) To compare and contrast legal systems throughout the world.

Description: This course will provide an overview of the criminal and civil legal systems in the United States. Topics of study include the criminal and civil trial procedure, an examination of common criminal charges and civil litigations, and a study of Pennsylvania school law. This pre-law focused course will provide an overview of both the Federal and State legal systems. While the focus of the course will be American law, students will also compare and contrast the American legal system with other systems of law throughout the world.

Expectations: Students are required to participate in class, complete all homework assignments, readings, projects, and prepare thoroughly for all exams.

8860 MODERN HISTORY THROUGH POP CULTURE

Grades 11-12

.5 Credit/1 Trimester

Prerequisite: Completion of or simultaneous enrollment in AP US History or US History

Objectives: To gain a thorough understanding of modern United States history through the vehicle of pop culture.

Description: Modern History through Pop Culture will look at major political events/issues and social changes in the United States from the post-World War II era to the present through the vehicle of pop culture. Major topics will include The Changing Family Changing Social Mores, Race & Ethnicity in America, Changes in 'War' Movies over Time, and Political Commentary & Satire. We will look at how various events and social issues are dealt with in TV and film and how changes in "presentation" of issues change over the decades. The changing family/gender roles will be studied through iconic shows of the 1950s like *I Love Lucy*, *The Donna Reed Show*, and *Leave it to Beaver* in the 50s, to current shows including *Modern Family*. Issues regarding changing attitudes about race/ethnicity would be covered in movies like *Guess Who's Coming to Dinner*, *All in the Family*, *The Jeffersons*, and *The Cosby Show*. Additionally, dealing with issues of war might include changing portrayals of the Vietnam War via sections of movies from John Wayne's *The Green Berets* and *The Deer Hunter*, TV shows like *MASH*, *Homefront*, and *China Beach*, through more recent films about the Iraq War. Finally, we will study political commentary and political satire through serious movies like *Good Night & Good Luck* as well as selections of humorous shows like *Laugh-In*, *SNL*, *The Colbert Report*, and *The Daily Show*.

Expectations: Students are expected to attend and participate regularly in class, use prior knowledge of US history to make connections to issues studied in the course, and complete all written assignments.

4214 AP US GOVERNMENT AND POLITICS

Grades 12

1.0 credit/2 Trimesters

Prerequisite: Successful complete of tenth or eleventh grade AP or honors level history

Standards: College Board AP US Government and Politics Curriculum Outline

Description: AP US Government & Politics introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning, assess causes and consequences of political events, and interpret data to develop evidence-based arguments. Major units of study include Constitutional Underpinnings; Political Beliefs & Behaviors; Political Parties, Interest Groups, and Mass Media; Institutions of National Government; Public Policy; and Civil Rights & Civil Liberties. An integral part of the course includes analysis and interpretation of basic data relevant to US government and politics, and the development of connections and application of relevant theories and concepts.

8126 INTRODUCTION TO WOMEN'S STUDIES

Grades 11-12

.5 credits/1 Trimester

Prerequisite: Completion or concurrent enrollment in AP US History or US History

Description: Introduction to Women's Studies is a 12 week elective that will have an element of both history and modern women's issues. The course will take a look at the history of the women's suffrage movement, focusing largely on the U.S. women's movement with some background on the suffrage movement in Europe. Our second area of study will be the role of economic, political, and social changes in the late 19th century and over the course of the 20th century and the impact of these changes on the role of women in society. Major areas of focus regarding these changes will be the Gilded Age and Progressive Era that led many women into low paying jobs and led many middle class women into the reform movements. Additionally, we will look closely at the role of the world wars in bringing women into the work force. And finally, in terms of history, we will study the development of the Feminist Movement in the wake of World War II through the 1970s. Our studies of modern women's issues will look at the consolidation of gains for women over the course of the past few decades while considering the problems and opportunities of current society. The course will follow a seminar model and will be largely reading and discussion based. Readings will be pulled from a variety of historical texts, secondary and primary sources, as well as current journals, essays, and newspapers. Additionally, the course will include analysis of music, poetry, short stories, TV and film.

World Language

The primary goal of World Language is to develop linguistic proficiency and cultural sensitivity in order to prepare students to participate in our global society. The four essential skills of listening, speaking, reading, and writing are balanced within each level, and students increasingly develop their communicative skills as they deepen their appreciation of other cultures.

It is recommended that students take at least two years of the language they select. Those who plan to study languages, literature, the humanities, or fine arts in college should make every effort to complete four years of language study in high school. Many competitive colleges and universities require a minimum of three years of world language study for admittance. Students should familiarize themselves with the requirements of schools that they may be considering.

Courses are offered only if there is sufficient enrollment.

3525 FRENCH I Grades 9 – 12 1.5 Credits/3 Terms



Prerequisite: None.

Description: In French I, students will begin to acquire proficiency in listening, speaking, reading, and writing in the target language, with major emphasis being placed on oral communication. Students will progressively develop proficiency skills through numerous and varied oral and written exercises set in meaningful and personalized contexts. Students will gain an increased knowledge and appreciation of the Francophone world abroad and in the United States. This course will help prepare students to participate in a multi-cultural and diverse global society.

Expectations: Students are expected to demonstrate success in oral and written proficiency assigned in the classroom setting as well as independently or in small groups. Frequent oral and written assessment, regular lesson quizzes, unit exams, and/or group or individual projects. A final grade of at least a C is required to advance to the next level.

3528 FRENCH II Grades 9 - 12 1.5 Credits/3 Trimesters



Prerequisite: Successful completion of middle school French or successful demonstration of proficiency.

Description: In French II, students continue to develop proficiency skills as they increase their ease and confidence in communicating in French on a daily basis. Students' knowledge and usage of structural foundations are expanded and implemented in all four areas of proficiency. Further cultural inquiries assist students to comprehend the role of French-speaking countries in various aspects of civilization, both contemporary and throughout the centuries.

Expectations: Students are expected to demonstrate success in oral and written proficiency tasks in the classroom setting as well as independently or in small groups. Frequent oral and written assessment will include quizzes, exams, readings, in-class formal and informal writings, oral presentations, and in-depth individual or group projects. A final grade of at least a C is required to advance to the next level.

3529 FRENCH III Grades 9-12 1.5 Credits/3 Trimesters



Prerequisite: Successful completion of French II as well as teacher recommendation.

Description: In French III, students continue to build on a solid foundation of grammar and vocabulary in order to enable students to become more proficient in French. Vocabulary acquisition in context and basic language structures from previous courses are supplemented and developed progressively. Through an interweaving of language and culture, French III will broaden students' communication skills while deepening their appreciation of other cultures. This course will help students to be linguistically and culturally prepared to participate in our global society as well as in comprehending and negotiating meaning in French. The class will be taught mostly in French. It is expected that students will use French in class to ask questions and communicate needs.

Expectations: Students are expected to actively participate in class discussions and activities in the target language. Students are expected to demonstrate success in oral and written proficiency tasks in the classroom setting as well as independently or in small groups. Frequent oral and written assessment will include quizzes, exams, readings, in-class formal and informal writings, oral presentations, and in-depth individual or group projects.

4520 HONORS FRENCH IV
Grades 11 – 12 or Proven Proficiency
1.5 Credits/3 Trimesters



Prerequisite: Successful completion of French 3 as well as teacher recommendation

Objectives: 1. To review and continue to build on vocabulary and structures from previous years and French-learning experiences. 2. To explore and master new and more advanced language tasks in the core areas of reading, writing, speaking, and listening. 3. To develop a familiarity and appreciation for French and francophone literature through selected authors and works. 4. To prepare students with a strong foundation for AP French, should they decide to continue their language study.

Description: In Honors French 4, students will explore the language through different mediums, such as literature, native speakers, and cultural activities. The students will refine their language skills and strive to increase their language proficiency. Students will read, interpret, and discuss selections from French and francophone literature. This class is conducted almost exclusively in French.

Expectations: Students are expected to read, analyze, and be able to discuss literary selections. They should be able to function in all four areas of reading, writing, speaking, and listening in French on an intermediate level, as described by the ACTFL (American Council on the Teaching of Foreign Languages) scale. This course is a preparatory course for AP French; however, the student is not required to move on to AP beyond this course. Students are expected to actively participate in class discussions and activities in the target language.

4314 AP FRENCH
Grade 12 or Proven Proficiency
1.5 Credits/3 Trimesters



Prerequisite: Successful completion of Honors French 4 as well as teacher recommendation.

Objectives:

1. To offer students a college level course that explores the French cultures and language.
2. To further increase the proficiency level in the four language skills of speaking, reading, writing, and listening.
3. To prepare students for the AP French language test.

Description: This course is designed as an intensive preparation for students that continue in French. They will explore the language through different mediums, such as literature, native speakers, and cultural activities. The students will refine their language skills and strive to increase their language proficiency. This course will also further develop the language skills that students need to take the AP French language test. This course is conducted exclusively in French.

Expectations: In AP French, students will be able to function in all four areas of reading, writing, speaking, and listening in French on an intermediate/advanced level, as described by the ACTFL (American Council on the Teaching of Foreign Languages) scale. They are expected to read, analyze, and to be able to discuss literary selections. Students are expected to actively participate in class discussions and activities in the target language. Students are required to take the AP French language exam.

3543 SPANISH I
Grades 9-12
1.5 Credits/3 Trimesters



Prerequisite: No prior Spanish

Description: Spanish I presents basic language structures and promotes cultural awareness. Communication is the focus of the course (understanding and being understood by others). Students are expected to communicate within three main modes of communication: interpersonal, interpretive, and presentational. Tasks are varied to provide a balanced approach to the core language skills of reading, writing, speaking, and listening. Attention to vocabulary usage, language control, communication strategies, and cultural awareness prepares the student for basic exchanges in Spanish. The course is taught approximately 50% in Spanish.

Expectations: Students are expected to engage in spoken and written interpersonal communication; interpret a variety of authentic sources such as audio, visual, audiovisual, written and print; plan, produce and present spoken and written presentational communications.

3544 SPANISH II
Grades 9 – 12
1.5 Credits/3 Trimesters



Prerequisite: Successful completion of middle school Spanish or demonstration of proficiency

Description: Students continue to develop proficiency skills as they increase their ease and confidence in communicating in Spanish on a daily basis. Students' knowledge and usage of structural foundations are expanded and implemented in all four areas of proficiency. Further cultural inquiries assist students to comprehend the role of Spanish-speaking countries in various aspects of civilization.

Expectations: Students are expected to demonstrate success in oral and written proficiency tasks in the classroom setting as well as independently or in small groups. Frequent oral and written assessments, lesson quizzes, unit exams, and individual/group projects are some forms of evaluation that will be used. Also, out-of-class readings and active participation in discussions will be an integral part of the class. A final grade of at least a C is required to advance to the next level.

3541 SPANISH III
Grades 10 - 12
1.5 Credit/3 Trimesters



Prerequisite: Successful completion of Spanish II AND teacher recommendation

Objectives: Students are expected to:

- Engage in spoken interpersonal communication;
- Engage in written interpersonal communication;
- Synthesize information from a variety of authentic audio, visual, and audiovisual resources;
- Synthesize information from a variety of authentic written and print resources;
- Plan, produce, and present spoken presentational communications; and
- Plan and produce written presentational communications.

Description: Spanish III continues to build on language structures and cultural awareness. Communication is the focus of the course (understanding and being understood by others). Students will continue to improve within three central modes of communication: interpersonal, interpretive, and presentational. Tasks are varied to allow for improvement in the fundamental language skills of reading, writing, speaking, and listening. Language instruction takes place within the context of thematic units. Attention to vocabulary usage, language control, communication strategies, and cultural awareness prepares the student for success in more advanced Spanish scenarios. The course is taught approximately 75% in Spanish.

4503 HONORS SPANISH IV
Grade 11
1.5 Credits/3 Trimesters



Prerequisite: Successful completion of Spanish III AND teacher recommendation

Objectives: Students are expected to:

- Engage in spoken interpersonal communication;
- Engage in written interpersonal communication;
- Synthesize information from a variety of authentic audio, visual, and audiovisual resources;
- Synthesize information from a variety of authentic written and print resources;
- Plan, produce, and present spoken presentational communications; and
- Plan and produce written presentational communications.

Description: Honors Spanish IV continues to build on the language base already established. Communication is the core focus of this course (understanding and being understood by others). This is accomplished by engaging the student in various modes of communication: interpersonal, interpretive, and presentational. Tasks are varied to enhance the fundamental language skills of reading, writing, speaking, and listening. The language is taught within the context of six overarching themes: families and communities, personal and public identities, beauty and aesthetics, contemporary life, global challenges, and science and technology. Attention is directed towards vocabulary usage, language control, communication strategies, and cultural awareness. Content encompasses an exploration of culture in both contemporary and historical contexts. The course is taught almost exclusively in Spanish.

4512 AP SPANISH
Grade 12
1.5 Credits/3 Trimesters



Prerequisite: Successful completion of Honors Spanish IV AND teacher recommendation

Objectives: Students are expected to:

- Engage in spoken interpersonal communication;
- Engage in written interpersonal communication;
- Synthesize information from a variety of authentic audio, visual, and audiovisual resources;
- Synthesize information from a variety of authentic written and print resources;
- Plan, produce, and present spoken presentational communications; and
- Plan and produce written presentational communications.

Description: The AP Spanish Language and Culture course emphasizes communication (understanding and being understood by others) by applying the interpersonal, interpretive, and presentational modes of communication in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP Spanish Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in Spanish. The AP Spanish Language and Culture course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).

Self-Directed Experiential Learning

During Grade 10, students will engage in a self-directed learning experience that will earn 1.0 credits and fulfill a requirement for graduation. Designed to foster talent development in areas of students' personal strengths and interests, these experiences will focus on skills such as initiative, perseverance, time management, communication, responsibility, and problem-solving. Students will participate in a series of seminars to help them to conceive an idea, plan and execute a goal and reflect on what they've learned as they complete the task, project or experience they've designed.

7928 SELF-DIRECTED EXPERIENTIAL LEARNING (SDL)

Grade 10

1.0 Credit/2 Trimesters

Prerequisite: Completion of interest and learning style inventories and assessments in grade 9

In keeping with our goal to prepare students for life after high school, students will complete an SDL option in grade 10. This required course is designed by the student after analysis of the individualized data produced on various learning style and interest inventories completed in grade 9. The SDL consists of a series of seminars that guide the process, however the designed experiences are highly individualized and require students to develop and practice skills such as time management, initiative, communication, problem-solving, perseverance, and independence as they work to achieve their goal. Students may create an experience that is uniquely theirs, or may design an initiative in conjunction with an established program or activity approved by the principal.

Internships/Apprenticeships/ Work-Based Learning Experience

Quaker Valley High School students can earn credit for various internship, apprenticeship, and work-related experiences. Individualized opportunities beyond this list can be created, based on student and community requests. Contact Mrs. Keller for further information (kellera@qvsd.org).

PEER HELP DESK INTERNSHIP

Grades 9 - 12

.5 Credit/1 Trimester

Prerequisite: Acceptance based on application and interview—a limited number of students are accepted. Interns must display maturity, responsibility and a trustworthy nature. Interested students should contact Mrs. Keller or Mr. Hollein for an application.

Objectives: To create a community of problem solvers in Marketing Communications, Information Technology, and Peer Tutoring that support educational advancement within the Quaker Valley School District.

Description: Students choose one of two areas of emphasis to assist with various peer-related initiatives including but not limited to:

7920 *PhD Manager/Tutor Intern*

- *Managing program communications
- *Fostering collaborative work environment within the program
- *Developing internal/external communications and materials
- *Acting as program liaisons with program teachers, staff, students and administration
- *Acting as innovators for program development
- *Meet with and help students in need of classwork assistance
- *Provide assistance and support for classroom teachers
- *Administer make-up tests and quizzes at the request of the classroom teachers
- *Create study guides to help students develop as critical/thinkers

7921 *PhD Technology Intern*

- *Problem solve with students and teacher for technology repair issues
- *Facilitate innovation and learning in the classroom with the support of teachers and students
- *Create tools that help the end-user as a problem solver
- *Provide assistance and support for information technology issues across the school district

Expectations: In order to support students, staff, and teachers, interns must be mature, responsible, and trustworthy. Internships may take place in school during regularly scheduled class periods (scheduled) or after regular school hours (independently) depending upon need, position, and scheduling.

7906 TEACHER ASSISTANT

Grade 12

.5 credit/Trimester

Students are eligible to complete a Teaching Assistant (TA) experience during their senior year of high school. Seniors completing this elective will gain experience in classroom preparation, lesson planning, instruction, classroom management, and assessment of student learning by working under the supervision of a high school teacher. TAs may be placed within a freshman, sophomore, or junior classroom (no senior classes) and will receive .5 elective credit based on a Pass/Fail grade for each trimester completed. Seniors interested in this experience should make prior arrangements with a teacher and review the specific program requirements and expectations with that faculty member.

7907 WORK-BASED LEARNING EXPERIENCE

Grades 11 – 12

.5 credit/Trimester

Working during high school provides a unique learning experience for students. Therefore, students are eligible to earn credits for work experience during their junior and senior year. Students must work a minimum of 5 hours per week in order to qualify for this opportunity. Students must verify their work hours and participate in a reflection interview at the end of each term.

7911 ENVIRONMENTAL SCIENCE INTERNSHIP

Grades 10 – 12

.5 credit for the year

Space is limited and an application must be submitted. The Environmental Science Internship (aka QV Creekers) is an after-school hands-on experience in collaboration with environmental educators from Fern Hollow Nature Center and Creek Connections of Allegheny College. Its purpose is to monitor the health of the Little Sewickley Creek Watershed throughout the year. Participants will learn and work with environmental professionals in the fields of biology, botany, geology, herpetology, ichthyology and environmental science. Interns also create and design a group research project. QV Creeker meetings are generally held twice monthly after school during the school year.

7917 WORLD VISION INTERNSHIP

Grade 12

.5 Credit/Trimester

Space is limited to one intern per trimester and an application and interview are required. World Vision is an international humanitarian organization dedicated to working with communities worldwide, tackling the causes of poverty and injustice. Interns work with World Vision at their Global Distribution Center in Sewickley with corporate development directors to procure products for distribution, help with public relations, and coordinate volunteer groups. Students may schedule time during or after the school day, completing a minimum of 5 hours per week.



7922 ACE INTERNSHIP (Architecture, Construction Management and Engineering)

Grade 9-12

.5 credit for the year

ACE is a national organization with over 100 affiliates throughout the US. This is an after-school, hands-on experience led by professionals. Participants are grouped with other area high school students while learning about all aspects of construction including: civil, structural, geotechnical, mechanical, and environmental engineering; architectural and interior design; as well as the contributions of the electrical, stone, carpentry, and plumbing trades. A culminating activity includes group presentations of the year's work. Meetings are generally held twice monthly after school during the school year.

7924 QV COFFEE SHOP INTERNSHIP

Grades 9-12

.5 Credit/Trimester

Students have the opportunity to work as student managers in QVHS's coffee and breakfast bar. Students will develop the following skills: Leadership, Independent Thinking, Problem Solving, Communication, and Organization. Food Service Interns will: set up breakfast options, prepare coffee and tea, operate the Point of Sale System, manage student helpers from the Life Skills Program, complete daily production and sales records, conduct daily inventory of all products, market the program (conduct student surveys), communicate with HS Cafe Kitchen Lead for ordering of products, follow food safety and sanitation during operation, follow the federal and state rules and regulations of the National School Breakfast Program as well as the Allegheny County Health Department for food safety.

7925 CARNEGIE MELLON'S ENTERTAINMENT TECHNOLOGY CENTER APPRENTICESHIP

Grades 9-12

.5 Credit for the year

Carnegie Mellon's Entertainment Technology Center is the premiere professional graduate program for interactive entertainment founded as a joint venture between Carnegie Mellon University's School of Computer Science and the College of Fine Arts. Creative endeavors at the ETC focus on transformational games, innovation by design, and interactive storytelling. QV students have the opportunity to work individually or in teams to create interactive media that's entertaining, engaging, and purposeful. Students meet bi-monthly with the ETC's Education Outreach Coordinator, attend select workshops run by ETC alum and graduate students, and present final projects at the end of the year.

QVO-Quaker Valley Online Courses

QVO courses may be scheduled as one of the six periods of the day or as an additional credited class beyond the school day. Online instructors provide content, assignments, feedback, and tests that are monitored by Quaker Valley teachers. Students are required to stay in contact with their online instructor and should notify the QV teacher if they are experiencing difficulty with the online instructor. Students join virtual classmates from all over the country in discussions, peer editing, and other collaborative activities via the laptop computers. All students enrolled in AP online courses **are required** to take the associated Advanced Placement Examination for the enrolled course. Students will be issued a grade based on performance throughout the course that will be added to the official transcript along with credit. Students taking AP courses who earn a grade of C+ or higher will receive an added value of .06 into the GPA. Enrollment slots are limited. QVO courses run on a semester schedule rather than the high school trimester schedule.

5105hv AP ENGLISH LANGUAGE AND COMPOSITION QVO **Grades 11 - 12** **1.5 Credits/2 Semesters (Full Year)**

Prerequisite: Grade of A in most recent Honors English course

Standards: The College Board topic outline for AP English Language and Composition

Description: In AP English Language and Composition, students learn to understand and analyze styles of writing by reading work 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. The equivalent of an introductory college-level survey class, this course prepares students for the AP Exam and for further study in communications, creative writing, journalism, literature and composition.

5802hv AP COMPUTER SCIENCE QVO **Grades 11 – 12** **1.5 Credits/2 Semesters (Full Year)**



Prerequisites: None.

Description: The AP Computer Science course is equivalent to the first semester of a college level computer science course. The course involves developing the skills to write programs or part of programs to correctly solve specific problems in Java. AP Computer Science also emphasizes the design issues that make programs understandable, adaptable, and when appropriate, reusable. At the same time, the development of useful computer programs and classes is used as a context for introducing other important concepts in computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, and the study of standard algorithms and typical applications. In addition, an understanding of the basic hardware and software components of computer systems and the responsible use of these systems are integral parts of the course.

5203hv AP STATISTICS QVO **Grades 11 - 12** **1.5 Credits/2 Semesters (Full Year)**

Prerequisite: Grade of B in Honors Advanced Algebra or Math Analysis

Standards: The College Board topic outline for AP Statistics

Description: AP Statistics give students hands-on experience collecting, analyzing, graphing and interpreting real-world data. They'll learn to effectively design and analyze research studies by reviewing and evaluating real research examples taken from daily life. The next time they hear the results from another poll or study, they'll know whether the results are valid. As the art of drawing conclusions from imperfect data and the science of real world uncertainties, statistics plays an important role in many fields. The equivalent of an introductory college-level course, AP Statistics prepares students for the AP Exam and for further study in science, sociology, medicine, engineering, political science, geography and business.

5402hv AP MACROECONOMICS QVO
Grades 11-12
.75 Credit/1 Semester (Half of Year)



Prerequisite: Successful completion of Honors Advanced Algebra; AP Microeconomics

Standards: The College Board topic outline for AP Macroeconomics

Description: AP Macroeconomics students learn why and how the world economy can change from month to month, how to identify trends in our economy, and how to use those trends to develop performance measures and predictors of economic growth or decline. They'll also examine how individuals, institutions, and influences affect people, and how those factors can impact everyone's life through employment rates, government spending, inflation, taxes, and production. The equivalent of a 100 level college-level class, this course prepares students for the AP Exam and for further study in business, political science and history.

5401hv AP MICROECONOMICS QVO
Grades 11 - 12
.75 Credit/1 Semester (Half of Year)

Prerequisite: Two years of Social Studies

Standards: The College Board topic outline for AP Microeconomics

Description: AP Microeconomics studies the behavior of individuals and businesses as they exchange goods and services in the marketplace. Students will learn why the same product costs different amounts at different stores, in different cities, and at different times. They'll also learn to spot patterns in economic behavior and how to use those patterns to explain buyer and seller behavior under different economic conditions. Microeconomics studies the economic way of thinking, understanding the nature and function of markets, the role of scarcity and competition, the influence of factors such as interest rates on business decisions, and the role of government in promoting a healthy economy. The equivalent of an introductory college-level course, AP Microeconomics prepares students for the AP Exam and for further study in business, history, and political science.

5711hv MARKETING QVO
Grades 11-12
.75 credits/Semester

Description: In this course, the student will explore factors influencing how marketing decisions are made, including the impact of marketing decisions on an organization and its customers. Throughout the course, the student will gain a working knowledge of practical marketing and business vocabulary. The student will also evaluate how the actions of competitors influence marketing decisions in the global marketplace.

5710hv ACCOUNTING QVO
Grades 11-12
.75 credits/Semester

Description: This course introduces students to accounting concepts and principles, financial statements, internal control design, and accounting for partnerships. By the end of the course, you will be able to: Define terms related to business accounting; Apply accounting concepts and principles; Prepare financial statements; Analyze financial statements for decision making; Evaluate internal controls; Account for partnership transactions; Differentiate international financial reporting standards from generally accepted accounting principles.

5325hv ANATOMY AND PHYSIOLOGY QVO
Grades 11-12
.75 credits/Semester

Description: In this course students will learn about anatomical structures and physiology of the human body. Body systems are discussed in terms of how each participates in homeostasis of the body. Students learn about selected major pathologies, including causes, symptoms, diagnostic procedures, and treatments, as well as common changes that occur through the life span. By the end of the course the student will be able to: Describe the organization of the human body; Explain the contribution that each body system makes to homeostasis of the body; Identify the major anatomical structures and the purposes of each body system; Explain the basic physiological processes in each of the body systems; Describe selected human diseases in terms of definition, cause, signs and symptoms and diagnostic procedures; Describe common issues or changes that occur in each body system throughout the lifespan.



Parkway West Career and Technology Center Career Majors at Oakdale Campus

The following programs are available to Quaker Valley High School students at the Parkway West Career and Technology Center (PWCTC) in Oakdale, PA. Students attend Quaker Valley High School on a half-day basis for academic classes, health, and physical education; the other half of the day is spent in the program at Parkway West.

Several programs offer a tech prep option in which the four year Parkway students are assured a **three-year program**. The fourth year can consist of an internship in the area of the student's technical program. Students who successfully complete Parkway West CTC programs may be eligible to earn articulated college credit from participating institutions.

9911 AUTO BODY REPAIR I 9912 AUTO BODY REPAIR II 9913 AUTO BODY REPAIR III 9915 AUTO BODY REPAIR IV

**Grades 9 - 12
4.5 Credits/Year**

The Auto Body Repair program is certified by the National Automotive Technology Education Foundation (NATEF) and provides instruction in the most current techniques for repair and replacement of damaged automobile parts. Students learn to repair collision damage and to replace quarter panels, door skins, and fenders. The curriculum also includes painting, MIG welding, collision repair, frame straightening, and damage analysis. Students gain experience in mixing and tinting paint, custom painting, computerized estimating, and auto detailing. Practical experience is also provided through a full-service auto body repair shop. Students have the opportunity to earn PPG Blue Level Paint and I-Car MIG Welding certifications. They are also eligible to earn I-CAR Points.

9914 AUTOMOTIVE TECHNOLOGY I 9915 AUTOMOTIVE TECHNOLOGY II 9916 AUTOMOTIVE TECHNOLOGY III 9918 AUTOMOTIVE TECHNOLOGY IV

**Grades 9 - 12
4.5 Credits/Year**

Automotive Technology is certified by the National Automotive Technology Education Foundation (NATEF) and affiliated with all of the major automotive manufacturers through Automotive Youth Educational Systems (AYES). Students prepare to take the Pennsylvania State Inspection License examination. Students learn basic vehicle maintenance, repair, and replacement of drive trains, brake systems, chassis components, and fuel and electrical systems. Special emphasis is placed on troubleshooting and engine performance via the use of state-of-the-art electronic diagnostic equipment. Practical experience is also provided in the auto repair shop. Under the Automotive Youth Educational Systems (AYES) apprenticeship program, students may qualify to become an apprentice working under mentor technicians. Students can earn certifications from AYES, the National Institute for Automotive Service Excellence (ASE), and the Coordinating Committee for Automotive Repair (CCAR).

9920 CONSTRUCTION TECHNOLOGY CLUSTER I

**Grades 9 - 12
4.5 Credits/Year**

First-year students spend nine weeks in each of the four areas of concentration offered in the Construction Technology Cluster: **Building Construction Technology, Electrical Systems Technology, Welding Technology** and **HVAC/R**. Upon successful completion of the one-year rotation, students will choose a concentration for the remainder of their enrollment at PWCTC.

Building Construction Technology: Students in this program will apply technical knowledge and skills to layout, fabricate, erect, install and repair structures and fixtures using hand and power tools, scaffolding and specialty tools used in the construction trade. This program includes instruction in common systems of framing, construction materials, estimating, blueprint reading and finish carpentry techniques. Students are given the opportunity to earn a 10-hour Occupational Safety and Health Administration (OSHA) Construction card.

Electrical Systems Technology: Students learn the integral components of the electrical industry for entry level employment in residential, commercial and/or light industrial locations. The basis of instruction is in the layout, assembly, installation, wiring, maintenance and trouble-shooting of electrical systems. Understanding programmable logistical controls (PLCs) and how transformers operate are also covered.

Welding Technology: This program covers several types of welding processes by which metal may be bent, cut or welded together, including oxy-fuel, shielded metal arc, gas metal arc, gas tungsten arc, flux core welding, carbon arc, plasma cutting and oxy-fuel brazing. Students will learn the importance of industry safety, measuring instruments, handtools, grinders, metallurgy, blueprint reading, electrical principles, layout/design and fabrication. They will also learn how to prepare materials list for cost estimates. Students have the opportunity to earn several American Welding Society (AWS) certifications.

HVAC/R: The Heating, Ventilation, Air-Conditioning and Refrigeration program has newly renovated state-of-the-industry equipment and provides instruction in basic and advanced electrical theory, troubleshooting and repair of residential and commercial heating, air-conditioning and refrigeration systems. Students are given the opportunity to earn a 10-hour OSHA Construction Card.

9929 COSMETOLOGY I
9930 COSMETOLOGY II
9931 COSMETOLOGY III
9933 COSMETOLOGY IV
Grades 9 - 12
4.5 Credits/Year

Students who successfully complete 1250 hours of instruction in the Cosmetology program are eligible to take the Pennsylvania State Board of Cosmetology Examination and become certified as licensed cosmetologists. Cosmetology prepares students to perform technical services including all aspects of hair, skin/nail beautification, and personal maintenance. These skills are supported and reinforced with theoretical background including sanitation, chemistry, anatomy and physiology, as well as structure, function, and disorders of the hair, skin, nails, and scalp.

9902 NAIL TECHNICIAN LICENSE
Grade 12
4.5 Credits-one year

This license requires 200 hours of instruction and can be completed within one year. An individual holding a nail technician license is qualified to perform nail technology services only.

9968 CULINARY ARTS I
9969 CULINARY ARTS II
9970 CULINARY ARTS III
99972 CULINARY ARTS IV
Grades 9 - 12
4.5 Credits/Year

The Culinary Arts program provides practical instruction in the preparation of banquet, buffet, and a la carte styles of food preparation. Practical experience is provided through the operation and management of an in-house, full-service restaurant and beyond the restaurant environment to provide goods and services for Parkway's food store, where pastries and select meats are sold. Students learn to design cakes, sculpt ice, and prepare many different types of cuisine. Senior students who have completed at least two years of Culinary Arts will have the opportunity to earn both the National Restaurant Associations ServSafe certification and the American Culinary Federation certification.

9923 DIGITAL MULTIMEDIA I
9924 DIGITAL MULTIMEDIA II
9925 DIGITAL MULTIMEDIA III
99927 DIGITAL MULTIMEDIA IV
Grades 9 - 12
4.5 Credits/Year



The Digital Multimedia Technology program provides instruction in basic graphic design using computers and design software such as Adobe Illustrator, Acrobat, Photoshop, InDesign, and Dreamweaver. Students learn entry-level skills for desktop publishing, web design, digital photography, and graphic animation utilizing Flash. Several software applications are used to design, edit, and publish documents, images, and multimedia presentations in print and electronic form. Students can earn the Adobe Certified Associate certification in Visual Communication and the Adobe Certified Associate in Web Communication certification via Certiport.

9947 HEALTH ASSISTANT I
9948 HEALTH ASSISTANT II
9949 HEALTH ASSISTANT III
99951 HEALTH ASSISTANT IV
Grades 9 - 12
4.5 Credits/Year

The Health Assistant program is a dynamic, well-rounded view of several health occupations for students to explore. Students in this program have the opportunity to participate in a wide-range of real-world clinical and job shadowing experiences at many different local healthcare providers such as hospitals and other medically related facilities. Clinical experiences may include: child care, long-term care, emergency nursing, recovery room nursing, radiology, medical records, operating room observation, pharmacy, physical/occupational therapy, and/or lab technician.

99907 PHARMACY TECHNICIAN CERTIFICATION (CPhT)
Grade 12
4.5 Credits—one year

After successful completion of this one-year, 12th grade course, students will assist the pharmacist as a Pharmacy Technician in a variety of tasks. Module and lab work includes: controlled substances, laws and regulations, drug classifications, frequently prescribed medications, prescription information, preparing/dispensing prescriptions, calculations, sterile products, unit doses and repackaging.

99909 PHLEBOTOMY TECHNICIAN CERTIFICATION (CPT)

Grade 12

4.5 Credits-one year

This is a one semester certification course. Module and lab work includes: anatomy and physiology, infection control, safety and compliance, patient preparation, collection techniques and processing collected samples. Students must demonstrate a minimum of 30 successful venipuncture and 10 successful capillary punctures.

9980 INFORMATION TECHNOLOGY ESSENTIALS I 9981 INFORMATION TECHNOLOGY ESSENTIALS II 9982 INFORMATION TECHNOLOGY ESSENTIALS III 99984 INFORMATION TECHNOLOGY ESSENTIALS IV



Grades 9 – 12

4.5 Credits/Year

The Information Technology program prepares students who are interested in networking and computer diagnostics. It begins with Cisco IT Essentials, PC hardware and software, and network operating systems. Students initially prepare for CompTIA A+ and CompTIA Server+ certifications and then, through the Cisco CCNA Discovery course, students learn networking concepts based on typical networks that one might encounter in a home or small office, or in larger, more complex enterprise models. Finally, students can prepare for the Cisco CCENT and Cisco CCNA certifications.

9977 PUBLIC SAFETY TECHNOLOGY I 9978 PUBLIC SAFETY TECHNOLOGY II 9979 PUBLIC SAFETY TECHNOLOGY III 9983 PUBLIC SAFETY TECHNOLOGY IV

Grades 9 – 12

4.5 Credits/Year

The Public Safety Technology program focuses on careers relating to emergency medical services, firefighting, law enforcement, and emergency management services. In order to successfully complete the program, students must meet minimum proficiency levels in all public safety areas. Instruction is provided in disaster situations/management, hazardous materials handling, pre-hospital medical care, map reading, firefighting, the judicial system, and emergency dispatching.

9987 VETERINARY TECHNOLOGY I 9988 VETERINARY TECHNOLOGY II 9989 VETERINARY TECHNOLOGY III 99991 VETERINARY TECHNOLOGY IV

Grades 9 – 12

4.5 Credits/Year

Veterinary Technology or “Vet Tech” students will learn to keep medical records, schedule, offer client education, practice laboratory procedures, assist with nursing duties, prepare for surgeries, and assist during a routine exam. Students will also gain a solid educational base on which to build a post-secondary degree.

99911 SPORTS MEDICINE AND REHABILITATION TECHNOLOGY I 99912 SPORTS MEDICINE AND REHABILITATION TECHNOLOGY II 99913 SPORTS MEDICINE AND REHABILITATION TECHNOLOGY III 99916 SPORTS MEDICINE AND REHABILITATION TECHNOLOGY IV



Grades 9-12

4.5 Credits/Year

The Sports Medicine and Rehabilitation Therapy Technology (SMARTT) Program prepares students to work in the field of physical therapy, occupational therapy and sports medicine. Students will develop skills in prevention, diagnosis, differential diagnosis, assessment, prognosis and the rehabilitation of injuries and other health conditions. Students will learn the principles of developing a plan of care including: evaluation, interventions (exercise, manual therapy, modalities and neuro re-education), assessment, goal setting and discharge. Students will also learn how to develop a proper diet for healthy individuals and tailor it for special populations through a comprehensive understanding of nutrition. Upon successful completion, students should be able to assist in the development and implementation of a plan of care for healthy and special populations. Careers available directly out of the program could include: Personal Trainer, Coach, Physical Therapy Aid. This program also provides a solid educational base on which to build a post-secondary degree or advanced certification. Careers available with additional post-secondary schooling include: Personal Trainer, Athletic Trainer, Physical Therapist, Physical Therapist Assistant, Occupational Therapist, Certified Occupational Therapist Assistant, Strength and Conditioning Coach, Medical and Exercise Physiology researcher, Sports Psychologist, Dietitian and Exercise Physiologist.

Course and Credit Planning Guide

The Course and Credit Planning Guide is a sample of the credit sheet the guidance office uses and maintains for graduation purposes. The guide should be used by a student to adequately plan their four years at Quaker Valley High School. Total credits for each course are noted with course descriptions in the Program of Studies.

	Minimum Required Credits	Grade				Totals
		9	10	11	12	
English & Composition	5.0					
Social Studies	4.0					
Science & Technology	4.5					
Mathematics	4.5					
Health I (9 th or 10 th grade) Health II (11 th or 12 th grade)	1.0					
Self-Directed Experiential Learning (10 th grade)	1.0					
Physical Education	1.0					
<i>Elective Art</i>	10.0					
<i>Elective Computer/Media</i>						
<i>Elective English</i>						
<i>Elective Family & Consumer Science</i>						
<i>Elective World Language</i>						
<i>Elective Math</i>						
<i>Elective Music</i>						
<i>Elective Social Studies</i>						
<i>Elective Pre-Engineering & Tech</i>						
Elective Career Tech. Center						
Internships, PhD, Work Study						
Totals	31.0					