



Dear Parents and Students:

Elizabeth Forward High School's administration and faculty have prepared this 2018-2019 Program of Studies to assist you in planning an appropriate educational program to meet your child's academic goals.

In addition to providing an overview of the academic program offered at Elizabeth Forward High School, this guide also contains graduation requirements, course descriptions, support services, explanations of programs/procedures, course prerequisites, and assistance with the scheduling process.

The guidance counselors work closely with students to assist and monitor student course selections and to identify student strengths, interests, aptitudes and limitations. This guide should also be used to assist you in making academic decisions that prepare your child for their plans following high school.

Please review this Program of Studies carefully with your child and select courses that are of both a personal interest and consistent with his/her abilities and educational goals.

It is my hope that this guide assists you with the scheduling process while providing a significant amount of information about Elizabeth Forward High School's academic program. Do not hesitate to call our guidance department with questions about this document or the scheduling process.

Yours in education,

Mr. Michael Routh
Principal, Elizabeth Forward High School

Together we pave the road to success!

Elizabeth Forward School District

Mission Statement

The mission of the Elizabeth Forward School District is to establish a collaborative working relationship with its families and communities to create learning environments for all students that nurture the academic, social, and emotional skills of each student through high expectations of excellence that produce lifelong learners, world-ready leaders, and citizens who are prepared to meet the ever-changing challenges of a global society.

The following are the values and beliefs that serve as a foundation for learning in the Elizabeth Forward School District. The Elizabeth Forward School District believes that:

- All can learn.
- All students have the opportunity to maximize their potential.
- A caring, safe, and trusting environment is essential.
- All students have value and worth and are entitled to meaningful relationships with caring adults.
- The family provides the foundation for and instills the attitudes needed in assuring successful education and learning.
- All students have a right to high quality curriculum and instruction that focuses on rigor and relevance.
- All teachers and administrators share an unrelenting commitment to excellence for all students.
- Literacy is the foundation for all student success.
- Excellence in education is worth the commitment of time, effort, and money.
- All students will be prepared for a diverse, ever-changing global society.
- Education is the responsibility of the entire community, and all benefit when people work together through open and honest lines of communication.

The Elizabeth Forward High School is an equal opportunity education institution and will not discriminate on the basis of race, color, national origin, sex, and handicap in its activities, programs, or employment practices as required by Title VI, Title IX, and Section 504. For information regarding civil rights or grievance procedures, contact Dr. Randal Sydeski, Title IX Coordinator and Section 504 Coordinator, at 401 Rock Run Road; Elizabeth, Pennsylvania 15037-2416 (412) 896-2312.

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Information and Policies

Course Load

Students are required to schedule a minimum of (6.75) credits per year.

Graduation Requirements

The Elizabeth Forward School District defines graduation on the basis of the following three criteria:

1. Completion of specific courses and credits with passing grades as defined below
2. Demonstration of proficiency in reading and mathematics as measured by state and /or local assessments **
3. Successful completion of a senior project. This requirement will be incorporated into the English Curriculum.

The following course/credit requirements apply to all students. (Credits are totaled for grades 9-12.)

English	4	Credits
Social Studies	4	Credits
Mathematics	4	Credits
Science	4	Credits
Electives	3.0	Credit
Arts or Humanities or both	3	Credit
Physical Education/Swimming	1	Credits
Health	.50	Credits
Technology	.50	Credit
The ElizaBYTE Acacemy/Python Programming/ Honors Python Programmer/GameMaker Programming I	.50	Credit
Building Bridges to My Future	.50	Credit
Total Credits	25	Credits

Definitions	
Core Subjects	English, social studies, mathematics and science
Electives	Additional approved credit courses offered by the school district including vocational education courses
Art	Visual arts, music theatre, practical art(s)
Humanities	Subjects that embrace literature/reading, foreign languages, or additional courses in English and social studies
Technology	Subjects in the area of information technology and technology education, including coursework in the Entertainment Technology Academy

Keystone Exam Information
<p>** As of February 3, 2016, Senate Bill 880 requires students- beginning with the Class of 2019- to demonstrate proficiency on the Algebra 1, Biology, and Literature Keystone Exams. Students are required to take the Keystone exams at the end of each course, and are offered multiple opportunities to retake the exams if not proficient. Students will be scheduled for mandatory remediation courses if they do not pass any of the three Keystone Exams. The remediation course, for credit, will be scheduled in place of another elective. Students are also required to pass these remediation courses to fulfill their graduation requirements for Elizabeth Forward High School. As the Pennsylvania Department of Education finalizes plans for future Keystone Exams or changes these graduation requirements, the high school Program of Studies will be revised to reflect the changes.</p>

Information and Policies

Student Evaluation

Grading System

Student progress and achievement will be reported by a marking system that represents five (5) levels of achievement. Each percentage is assigned a designated letter grade as follows:

Percentage	Letter	Meaning
90-100	A	Superior
80-89	B	Above Average
70-79	C	Average
60-69	D	Below Average
50-59	F	Failing and No Credit
	I**	Incomplete
	M	Medical Excuse
	WF	Withdraw with Failing Grade
	FG	Failure due to Grading Policy

*All grades lower than Fifty Percent (50%) are recorded and calculated as Fifty Percent (50%) except when that grade is the result of significant absences or non-attendance in a class. The grade is then recorded as Zero Percent (0%).

Incomplete Grades

Students receiving an "I" (Incomplete) grade will have two (2) weeks from the end of the grading period to make up the assigned work. If work is not completed in that two-week period, the grade earned for all completed work will be the resulting grade. In the case of a lengthy absence, the "I" grade will be reviewed by the teacher and/or building principal.

Medical Excuses

If a student is physically unable to participate in Physical Education/Swimming, a medical excuse from a doctor must be submitted to the guidance counselor the first week of class. A student with a Swimming medical excuse will be placed in a physical education class to earn the .25 credits per semester. A student with a non-participation medical excuse for Physical Education will be placed in a study hall for the duration of the medical excuse and must complete an alternative assignment.

Failure due to Grading Policy

If a student fails a course due to grading policy (see page 7 passing grades) the percentage will remain the same but the grade will be designated as an "FG" on the student's final transcript.

Reports to Parents

The school year is divided into four (4) report periods, each nine (9) weeks in length. Grades for the first three (3) marking periods will be reported online and students/parents will be mailed a report card following the conclusion of the school year. This final report card will be a summary of a student's achievements in each course for the entire school year.

Information and Policies

Passing Grades

In order to pass a course, a student must meet all of the following criteria:

(A): Yearlong Course

- * A student must earn a minimum of 240 percentage points to pass the course.
- * A failing grade earned in M1, M2, and M3 will be recorded as a minimum of 50% or higher. If M4 is a failing grade, it will be recorded as the actual percentage (i.e. 27%). Any exceptions will require administrative approval.
- * A student must pass at least one of the final two grading periods.

(B): Semester Course

- * A student must earn a minimum of 120 percentage points to pass the course.
- * A failing grade earned in M1 (or M3) will be recorded as a minimum of 50% or higher. If M2 (or M4) is a failing grade it will be recorded as the actual percentage (i.e. 27%). Any exceptions will require administrative approval.

Mid Term Progress Reports

If, by the middle of each term, a student has earned a failing grade or is in danger of failing the course area, an interim report, called "Mid Term Progress Report," will be mailed to the parents or guardian during the fifth (5th) week of the report period. A Mid Term Progress Report may be generated at anytime during the grading period as circumstances warrant. This report is intended for both parents and students to be aware that a problem exists and that a communication or conference should be initiated by the parents or student with the instructor. Counselors are available throughout the day to assist students and parents. A conference with counselors or teachers may be arranged by calling 412-896-2352.

Honor Roll

The Honor Roll is prepared and reported for each nine (9) week report period as determined by the student's Grade Point Average. Students may not have a failing or incomplete grade at the time of the grade report. To determine one's G.P.A., a numerical value is assigned to a letter grade as listed on the next page under Grade Point Average. Any student with a G.P.A. of 3.50 to 4.00 and above will be designated as earning *High Honors* status. Any student with a G.P.A. of 3.00 to 3.49 will be designated as earning *Honors* status.

Graduation Honors

A student will be recognized during the Commencement Program as an *Honors* graduate if he/she has a cumulative G.P.A. of 3.0 – 3.49 in grades 9, 10, 11 and 12. If the cumulative G.P.A. is 3.50 – 3.99, the student will be designated as having earned *High Honors*. If the student's G.P.A. is 4.00 or above, the student will be designated as having earned *Academic Distinction*.

Early Graduation

In rare cases students may accumulate enough credits to satisfy requirements in advance of their regularly scheduled graduation date. Students and their parents are required to notify their school counselor in writing at least one semester in advance of their anticipated graduation. The school counselor will then conduct a thorough transcript review and will make a recommendation to the building principal. In all cases the building principal will give final approval. After permission is granted, the requirements for early graduation will be included in a written plan to be signed by the student, parent, principal, and school counselor. Please contact the guidance department with questions about the early graduation application process.

Information and Policies

Grade Point Average

The Grade Point Average is a measure of a student's academic standing. For the purpose of computing the quality points earned, each letter grade carries a given number of quality points as shown below:

	Regular Scale	Honors Scale	Advanced Scale
Grade	Quality Points	Quality Points	Advanced Placement /CHS Quality Points
A	4	4.5	5
B	3	3.5	4
C	2	2.5	3
D	1	1.5	2
F, WF, FG	0	0	0

To determine the <i>end-of-year grade point average</i>, the calculation is as follows:				
Course	Grade	Quality Points	Credits	Total
Course 1	A	4	1	4
Course 2	B	3	1	3
Course 3	C	2	1	2
Course 4	A	4	.5	2
Course 5 (Vo-Tech)	B	3	3	9
			6.5 Total	20 Total
Twenty (20) quality points divided by 6.5 course credits gives a year-end G.P.A. of 3.077.				

The ***cumulative grade point average*** is determined by dividing the total of all quality points earned by the total number of all credits awarded. For example, if a student attempted 18 credits and earned 45 quality points by the end of his/her junior year, the student's cumulative G.P.A. is 2.5.

Class Rank

The Elizabeth Forward School District does not calculate class rank.

Information and Policies

Student Attendance

Attendance

Attendance in school is required by law and should be encouraged by the parents. Attendance is reported each nine (9) weeks as part of the student report by the number of times a student is absent or tardy. Attendance is also recorded by each subject teacher and can be an important part of a student's grade. The student will have an opportunity to complete make-up work when he/she is absent; however, if the absence becomes unlawful/unexcused, any work submitted will become a zero (0). A total of four (4) unlawful absences will result in a parent meeting regarding absenteeism. A total of six (6) unexcused absences will result in a hearing with the magistrate. Excuses must be submitted within 3 school days. Excuses received after 3 school days will be logged, but the absence will be deemed unexcused.

College Visitation

Students visiting a post secondary institution will be granted up to a total of four (4) days of excused absences. The student must submit a written excuse on the college letterhead upon return to school.

Homework Assignment Requests

Students are to make every effort to keep up with homework and other assignments when they are absent from school or class. It is the responsibility of the student to contact the teacher to determine what was covered during the absence. It is suggested that parents call the Guidance Office if their child is absent for more than one (1) day so that homework/assignments can be collected.

Educational Vacation

Students are permitted to take a family vacation with educational value during the school year. The following procedures must be followed:

1. The parent/guardian obtains and completes the necessary paperwork from the school office. **(Must be submitted no less than 1-week prior.)**
2. Once approved by the principal, the student then contacts his/her teachers and arranges for missed assignments during the time period for which he/she will be absent.

Family vacations, with educational value, will be granted for up to five (5) school days throughout the year.

Information and Policies

Guidance Department/Scheduling

Elizabeth Forward School Guidance Department

Lauren Fusco, Guidance Secretary	Grades 9-12 A-Z	412-896-2352	Lfusco@efsd.net
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Nancy Gierl School Counselor	Grades 10-12 A - Le	412-896-2346	Ngierl@efsd.net
Joseph McManus School Counselor	Grades 10-12 Li - Z	412-896-2347	Jmcmamus@efsd.net
Crista Scalfari School Counselor	Grades 8, 9 A-Z	412-896-2334	Cscalfari@efsd.net

Guidance Services

The guidance department is comprised of two (3) school counselors and a guidance secretary. Their primary responsibility is to help students be successful academically, emotionally, and socially. This is done by working closely with teachers, parents, administrators, and other professionals.

Students typically see their guidance counselor about:

- * Academic progress
- * Post-secondary planning
- * College applications
- * Scholarships
- * Financial aid
- * Standardized testing
- * Social/emotional issues
- * Scheduling classes

To schedule a meeting with the guidance counselor, students can stop by the Guidance Office or a parent can call the guidance secretary at (412) 896-2352.

Course Limitations

Course offerings will depend on the availability of staff, space, resources, and potential scheduling limitations.

Scheduling Classes

With the assistance of school guidance counselors, students and their parents should select courses based on their academic interests, strengths, and goals. Several courses carry with them prerequisite courses and/or levels of achievement. Prior to enrolling in courses, the student should verify that he/she has met the necessary prerequisites. If, however, the student has not met the prerequisites but wishes to register for that course, he/she must complete a Waiver Form obtained from the Guidance Office, which will state that the student and parents understand that the student is taking the course against the recommendation of the faculty.

Information and Policies

Course Schedule Changes

All schedule changes must be made prior to the end of the present school year. ***No schedule changes will be made during the summer or when school begins.***

The following exceptions will be made if:

1. A student failed a subject and must repeat that course next year.
2. A parent believes that his/her child would benefit from a more challenging course in the same subject area and there is documentation to support this request.
3. A student's schedule is incorrect as a result of clerical error.
4. A student has not completed or failed summer school.
5. A student is identified as special needs and qualifies for certain adaptations/modifications under Federal Law.
6. A student has significantly changed his/her future plans and other course work is necessary.

Note: Written documentation by a college, trade school, or technical school is necessary.

WAIVER POLICY

A waiver is a contract between the student and parent(s) and the School District. It provides a course placement which supersedes the prerequisites of that course. The student may pursue such a contract. This action carries with it responsibility and accountability. Thus, the use of the waiver system may have consequences. Neither curricular content nor performance expectations of a course will be deleted or diminished to accommodate waived students.

Procedures

The current teacher shares the course recommendation with the student. If the parent/student indicates intent to opt for a course other than the recommended course:

1. Communication is initiated by the parent and student to the appropriate School Counselor.
2. A meeting will be set up by the academic review team (counselor, administrator, and department head, if applicable).
3. Information will be shared with the parent and student regarding the recommendation procedure, student achievement, and past performance of waived students in the course being considered.

If a waiver contract is still desired, the waiver form is given to the student by the School Counselor. The signed waiver implies the acknowledgment of the conditions identified in the form.

1. A list of waived students is generated by the Counseling Office and is distributed to Administration. The list will be kept on file in the counseling office.
2. If a student does withdraw from a course (after the first 15 school days) for which a waiver contract has been signed, the student will receive a **WF**, and that grade will be **included in the GPA calculation**.

Information and Policies

Withdrawals

Student schedules are designed to meet a student's interests and academic goals. No student will be permitted to withdraw from a course if he/she is carrying a **minimum course load (6.75 credits per year)**. A student may withdraw from a course under the following conditions:

- A. It does not reduce his/her schedule below the minimum yearly course load of 6.75 credits.
- B. The course is not required.
- C. The student is identified as special needs and the IEP Team determines that withdrawing from a course would benefit the student.

All withdrawals will adhere to the following:

- A. A semester course will be designated as a "W" if withdrawal occurs within the first (1st) week of the class.
- B. A semester course will be designated as a "WF" if withdrawal occurs beyond the first (1st) week of the class.
- C. A yearlong course will be designated as a "W" if withdrawal occurs within the first (1st) week of the class.
- D. A yearlong course will be designated as a "WF" if withdrawal occurs beyond the first (1st) week of the class

Summer School

Any student who fails a required course during the school year is encouraged to attend summer school for remediation. Students and parents should be advised that there is a fee for attending summer school that varies by summer school location. Students attending summer school in other school districts may apply for credit toward graduation if the following criteria are met:

- 1. Administrative/Guidance approval from the Elizabeth Forward High School is granted PRIOR to enrolling in any summer school course so that it can be determined if the course in which the student has enrolled will be accepted at and will satisfy Elizabeth Forward High School graduation requirements.
- 2. The summer school program meets all the requirements of the Pennsylvania Department of Education.
- 3. An official summer school transcript is submitted to the Elizabeth Forward School District immediately after completion of the course.
- 4. Students are permitted to earn a maximum of two (2) credits in summer school.

Transcript Requests

Seniors who are in the process of making application to college, trade, or technical schools must adhere to the following set of guidelines for completing applications:

- 1. Secure an application and complete all personal information.
- 2. Give the completed application to the senior year guidance counselor for processing.
- 3. Obtain a "Request for Transcript" release form in the Guidance Office. The form must be signed by the student's parent/guardian.
- 4. All official transcripts **must be mailed** to the receiving school by the counselor.
- 5. Please allow your guidance counselor at least two weeks to review your college applications and to process all transcript requests.

Note: Additional information is provided on the Elizabeth Forward School District website.

*** Once a student has graduated from high school, only the graduated student can sign the transcript release form.

Information and Policies

High School Diploma

Students are advised that the diploma granted upon graduation is **the only one**. Graduates should keep the diploma issued in a safe place, as **there is no copy or second diploma issued by the school district**. Students will be eligible to receive a PA Department of Education Certificate of Proficiency. These certificates are issued in response to performance on the Pennsylvania State Student Assessment Tests. To qualify for a certificate, a score of proficient or advanced must be obtained on the PSSA exams given during the junior year or retest in the senior year.

Privacy Rights of Parents and Students

Elizabeth Forward School District and its employees are required by Federal Law and State and Federal Rules and Regulations to protect the rights of students. The foundation of these rights comes from Federal legislation entitled, Family Educational Rights and Privacy Act of 1974 (also known as the Buckley Amendments). There are State Rules and Regulations dealing with regular and special education students' rights and privacy. All students are covered by the State Regulations contained in Chapter 12 known as Students' Rights and Responsibilities.

Written parental consent is necessary for disclosure of personally identifiable information and education records. The consent must (1) specify the records that may be disclosed; (2) state the purpose of the disclosure; (3) identify the party or class of parties to whom the disclosure may be made. Furthermore, Elizabeth Forward must maintain a written record of disclosure for the parents to inspect in case information has been released. For additional information, please consult <http://www.ed.gov/Policy/gen/reg/Ferpa/index.html>.

Curricula

Honors

Honors courses are rigorous courses that demand a high level of analytical reading ability and often lead to Advanced Placement studies. Students are required to spend a significant amount of time outside of class on course work and may have summer assignments. Pre AP and Honors courses are weighted (4.5) compared to a regular course (4.0).

Advanced Placement (AP)

Elizabeth Forward's Advanced Placement courses are approved by the College Board's Advanced Placement program. These courses have the rigor of a college level class and are taught by the Elizabeth Forward High School faculty. Students are expected to take the AP exam in May. The approximate cost of each AP exam is \$93.00 (AP Capstone is \$141.00) and the student is expected to make payment to Elizabeth Forward School District in March. The school district will reimburse the students if they receive a score of five (5) on the exam. Scores will be reported to the district in the summer and reimbursement will occur in September.

Current AP Courses taught at Elizabeth Forward are:

AP Biology	AP European History
AP Calculus AB	AP French
AP Calculus BC	AP Physics
AP Capstone Seminar	AP Spanish
AP Chemistry	AP Statistics
AP Computer Science A/CHS Intermediate Java	AP U.S. History
AP Computer Science Principles	AP World History
AP English 11 Language and Composition	AP Capstone Research
AP English 12 Literature	

The College-in-High-School Program (CHS) and Dual Enrollment (DE)

The College-In-High School Program is designed to allow the high school students to earn college credit(s) while studying at Elizabeth Forward High School. College credit is earned at a reduced rate payable to the university at the beginning of the school year. At the present time, CHS classes are offered through the University of Pittsburgh, Seton Hill University, Rochester Institute of Technology and LaRoche College. Upon successful completion of the course, students will receive college credit(s) and their grade(s) will appear on an official college transcript. **Please be advised that we are not notified of final course approval until after our school year begins.**

Current CHS/DE courses taught at Elizabeth Forward are:

DE Biology	DE European History
DE Calculus AB	DE French 5
DE Calculus BC	DE Honors Python Programming
DE Chemistry	DE Introduction to Engineering and Design
DE Computer Science Intermediate Java Programming	DE Physics C
DE Computer Science Java Programming	DE Principles of Engineering
DE Computer Science Website Design & Development	DE Spanish 5
DE English 11 Language and Composition	DE Statistics
DE English 12 Literature	DE U.S. History
	DE World History

Grading/Extra Quality Point

Students enrolled in the Advanced Placement (AP) and Dual Enrollment (DE) classes are assigned an extra quality point to the grade earned each report period, Students enrolled in the Honors courses are assigned one-half (.5) quality point to the value of the grade earned each report period. The purpose of this is to recognize the additional requirements in these courses.

Curricula

Distance Learning

With the changing technologies, Elizabeth Forward will consider offering courses not part of the traditional curriculum. These courses may be offered by neighboring school districts, universities, colleges, and virtual learning.

Support Services

Faculty

*Brett Anselmino
Marc Bellora
James Coll*

*Nicole Corson
Katie Geis
Lance Getsy*

*Dianne Keller
Shayne Long
David Permigiani*

The Special Education program at Elizabeth Forward High School provides a continuum of services. The goal of the program is to provide services in the Least Restrictive Environment, which includes the regular class, co-taught classrooms and direct instruction (resource room) classrooms. The district incorporates a variety of supplemental aids and services to help students succeed.

Co-Taught Classes

The co-taught class involves either two regular education teachers and/or a regular education and highly qualified special education teachers that work collaboratively to deliver and provide individual instruction when needed. The special education student that participates in a co-taught class benefits from being in the general curriculum both academically and socially.

Direct Instruction

The direct instruction class involves a special education teacher who is highly qualified for the content being taught in a special education resource room. This class will provide more opportunity to concentrate on specific behavioral, academic, and social needs in a smaller setting. Placement in a direct instruction class is based on student need and is an IEP team decision.

Gifted Education Program

The Gifted Education program at Elizabeth Forward High School is designed to meet the needs of gifted students as defined by the PA Special Education law and regulations outlined in Chapter 16. The Gifted Education Program provides such students with a variety of enriching activities in an academically and socially supportive environment. Participants are encouraged to take challenging Honors, Pre-AP, CHS and Advanced Placement courses. Students should consult with the Enrichment Facilitator and their Guidance Counselor to make the most of the valuable opportunities available to them.

Hearing Support Program

The Allegheny Intermediate Unit Hearing Support Programs provides hearing- impaired children with an education parallel to that of their hearing peers. The program develops optimum communication skills through sequential language acquisition. Children are placed in regular classrooms where their instruction is supplemented by itinerant speech, language, and other ancillary services.

Life Skills Support Program

The Life Skills Support class is a functional academic program emphasizing the development of the students' potential in personal/social skills, vocational, recreational and community living skills. The curriculum is aimed at teaching the life skills needed to achieve self-sufficiency and to provide students with an opportunity to acquire these independent living skills at a pace appropriate to the students' abilities and needs. One example of this curriculum is the Practical Assessment Exploration System (PAES) program. PAES is a functional skills curriculum with an embedded assessment of vocational potential and employability skills. PAES identifies: 1) aptitude for community based employment, 2) functional skills, 3) interests, 4) work behavior strengths and barriers to success. PAES is conducted in a simulated work environment within a classroom setting where students' work on simulations of actual tasks performed on community based jobs.

Speech and Language Support Program

The Speech and Language Support Program is provided to those students who have been diagnosed and are in need of support for disabilities in these areas.

Vision Support Program

The Allegheny Intermediate Unit Vision Support Program provides support to diagnosed visually impaired students.

Activities

ACTIVITIES

Activities	Sponsor	Email Address
Academic League	Mr. Coll	jcoll@efsd.net
Board Games	Mr. Smith	msmith@efsd.net
Bots IQ	Mr. Day	mday@efsd.net
Bowling	Mr. Browne	sbrowne@efsd.net
Christian Fellowship (not school sponsored)	Mrs. Herbst	kherbst@efsd.net
Choir	Mrs. Milliren	amilliren@efsd.net
Class Officers	Class Sponsor	Grades: 9,10,11,12
Coding Club	Mrs. Wilson	mwilson@efsd.net
Drama Club (Musical)	Mrs. Wieclaw	awieclaw@efsd.net
Green Team	Mrs. Keller/ Ms. Dombrowsy	dkeller@efsd.net/adombrowsy@efsd.net
Interact Club	Ms. Mazurek	mmazurek@efsd.net
Interschool Tutoring	Various	
Intramurals	Mrs. Kivador	kkivador@efsd.net
JSA (Junior State of America)	Mr. Madar/Mr. Raffaele	bmadar@efsd.net/rraffaele@efsd.net
Leo Club	Mrs. Wemyss	twemyss@efsd.net
Marching Band/Color Guard	Mr. Spang	sspang@efsd.net
MultiMedia Productions	Mrs. Milliren	amilliren@efsd.net
Mock Trials	Mr. Bellora	mbellora@efsd.net
National Honor Society	Mr. McManus	jmcmamus@efsd.net
Physics Club	Mr. Day	mday@efsd.net
Political Science Club	Mr. Raffaele	rraffaele@efsd.net
S.A.D.D. (Students Against Destructive Decisions)	Mr. Feick/ Ms. Dombrowsky	lfeick@efsd.net/adombrowsky@efsd.net
Ski Club	Mr. Day	mday@efsd.net
Spanish Club/Spanish Honor Society	Ms. Thurston	athurston@efsd.net
S.G.A. (Student Government Association)	Mrs. Spiegel	jspiegel@efsd.net
T.F.I.M (The Future Is Mine)	Ms. Scalfari	cscalfari@efsd.net
TSA (Technology Student Association)	Mrs. Stith	

Athletics

ATHLETICS

Athletics	
Fall	Cheerleading
	Cross Country
	Football
	Golf
	Soccer
	Volleyball
Winter	Basketball
	Hockey (Club Sponsored)
	Indoor Track (Club Sponsored)
	Swimming
	Wrestling
Spring	Baseball
	Softball
	Track and Field

** For any information regarding athletics, please contact Mr. Tim Guffey at tguffey@efsd.net.

The Elizabeth Forward School District provides extracurricular activities for all students to complement its academic program. The purpose is to offer a wide variety of programs to get as many students involved so that they are well rounded individuals and active participants demonstrating pride in their school.

NCAA Approved Courses

English

English 9, 10,11,12
 Honors 11, 12
 Pre AP 9, 10
 AP English 11
 AP English 12
 Mythology
 Creative Writing
 Public Speaking

Social Studies

AP World History
 AP European History
 AP US History
 Modern Western Civilization
 American History
 World Cultures
 American Government
 Economics
 Psychology
 Sociology

Mathematics

Algebra 1
 Algebra 2
 Algebraic Concepts with Trigonometry
 Probability & Statistics
 Academic Algebra 2
 Academic Geometry
 Academic Trigonometry & Pre calculus
 Calculus
 Honors Algebra 2
 Honors Geometry
 Honors Trigonometry & Pre Calculus
 AP Calculus
 AP Statistics

Science

Biology
 Honors Biology
 AP Biology
 Honors Anatomy & Physiology
 Academic Physics 1
 Academic Physics 2
 Honors Physics
 AP Physics
 Applied Chemistry
 Chemistry
 Honors Chemistry
 AP Chemistry
 Environmental Science

Additional Courses

French 1, 2, 3,
 Honors French 4
 AP French 5
 Spanish 1, 2, 3
 Honors Spanish 4
 AP Spanish
 AP Capstone Seminar
 AP Capstone Research

Course Recommendations

College Preparatory Curriculum (Sample)

Grade 9	Credits	Grade 10	Credits
English 9/Pre AP English 9	1.00	English 10/Pre AP English 10	1.00
Modern Western Civilization	1.00	American History/AP U.S. History	1.00
Academic Algebra 2	1.00	Academic Geometry	1.00
Honors Algebra 2		Honors Geometry	
Biology/Honors Biology	1.00	Chemistry/Honors Chemistry	1.00
Foreign Language (1 st year)	1.00	Foreign Language (2 nd year)	1.00
Building Bridges to My Future	0.50	Physical Education	0.25
Swimming	.25	Electives	2.50
The ElizaBYTE Academy/ Python Programming Honors Python Programming/ GameMaker Programming I	.50		
Health	.50		
Electives	1.00		
Total Credits	7.75	Total Credits	7.75
Grade 11	Credits	Grade 12	Credits
English 11/Honors English 11/AP English 11	1.00	English 12/Honors English 12 or AP English 12	1.00
World Cultures/ AP U.S. History/ AP European History/AP World History	1.00	Psychology, Economics, or Sociology	0.50
Honors Trig/Pre-Calculus	1.00	American Government/A.P. European History/ AP World History	0.50
Academic Trig/Pre-Calculus		Calculus/Probability & Statistics	
Academic Physics 1/Honors Physics/Honors Anatomy & Physiology	1.00	AP Calculus/AP Statistics	1.00
Foreign Language (3 rd or 4 th year)	1.00	Science	1.00
Physical Education	0.25	Foreign Language (4 th or 5 th year)	1.00
Electives	2.50	Physical Education	0.25
		Electives	2.50
Total Credits	7.75	Total Credits	7.75

Foreign Language Information:

Elizabeth Forward School District does not require a foreign language to graduate; however, most colleges require study of a foreign language. The foreign language recommendation is satisfied by completing at least two (2) courses in the same language. Please note that some colleges and universities require at least three (3) or more courses in the same language. See your guidance counselor for specific requirements for different colleges or universities.

STEM Career Information:

Students considering a STEM career should consider one or more computer science electives, including, but not limited to, Honors Python (DE), AP CS Principles, and AP Computer Science A (DE)

Course Recommendations

Career and Technical Education / Employment Curriculum (Sample)					
Grade 9		Credits	Grade 10		Credits
English 9	1.00		English 10	1.00	
Modern Western Civilization	1.00		American History	1.00	
Biology	1.00		Applied Chemistry/Academic Chemistry	1.00	
Algebra 1/Algebra 1B/ Algebra 2	1.00		Geometry	1.00	
Swimming	0.25		Physical Education	0.25	
Health	0.50		Electives	0.50	
Building Bridges to My Future	0.50		Cosmetology/Health Assistant	3.00	
The ElizaBYTE Academy/Python Programming/ Honors Python Programming/ Game Maker Programming I	0.50				
Electives	2.00				
Total Credits	7.75		Total Credits	7.75	
Grade 11		Credits	Grade 12		Credits
English 11	1.00		English12	1.00	
World Cultures	1.00		American Government	0.50	
Algebraic Concepts/Trigonometry	1.00		Sociology/ Psychology/Economics	0.50	
Applied Physics/ Academic Physics I	1.00		Science	1.00	
Physical Education	0.25		Integrated Math for the Workforce	1.00	
Electives	0.50		Physical Education	0.25	
Steel Center for Career and Technical Education	3.00		Electives	0.50	
			Steel Center for Career and Technical Education	3.00	
Total Credits	7.75		Total Credits	7.75	

Notes:

1. The Vocational Technical curriculum is offered in cooperation with Steel Center for career and Technical Education for Career and Technical education.
2. The Cosmetology and Health Assistant Programs are available in 10th grade.
3. Availability is based on Steel Center's program limits, and it is possible you may not be offered your first choice of program.

Course Offerings

COURSE	GRADE	CREDITS
Business, Computer & Information Technology		
Computer Science		
Python Programming	9,10,11,12	0.50
Honors Python Programming	9,10,11,12	0.50
Java Programming	10,11,12	0.50
Advanced/CHS Computer Science-Web Site Design & Development	10,11,12	0.50
AP Computer Science Principles	10,11, 12	1.00
AP Computer Science A/CHS Intermediate Java	11,12	1.00
App Development with Swift	11,12	0.50
GameMaker Programming		
ElizaByte Academy	9	0.50
Business		
Building Bridges to My Future	9	0.50
Computer Keyboarding	9,10,11,12	0.50
Sports Marketing and Entrepreneurship	9,10,11,12	0.50
Investing and Personal Finance	10,11,12	0.50
Accounting 1	10,11,12	1.00
Accounting 2	11,12	1.00
Business Law and the Legal Environment	10, 11, 12	0.50
Business Law and the Consumer Environment	10, 11, 12	0.50
English		
English 9	9	1.00
Pre-AP English 9 (Honors)	9	1.00
English 10	10	1.00
Pre-AP English 10 (Honors)	10	1.00
English 11	11	1.00
Honors English 11	11	1.00
AP English 11 Language and Composition (DE)	11	1.00
English 12	12	1.00
Honors English 12	12	1.00
AP English 12 Literature and Composition (DE)	12	1.00
Creative Writing	9, 10,11, 12	0.50
Irish Literature	10,11,12	0.50
Public Speaking	10,11,12	0.50
Mythology	10,11,12	0.50
Theatre Arts	10,11,12	0.50
Film Studies	9,10,11,12	0.50

Course Offerings

COURSE	GRADE	CREDITS
Entertainment Technology		
Evolution of Games	9,10,11,12	0.50
GameMaker Programming I	9,10,11,12	0.50
GameMaker Programming II	10,11,12	0.50
Unity 3D Programming	10,11,12	0.50
Screenwriting	9,10,11,12	0.50
Game Design	9,10,11,12	0.50
3D Modeling	9,10,11,12	0.50/1.00
Gaming Internship	11,12	0.50/1.00
Family and Consumer Science		
Intro to Foods	9,10,11,12	0.50
Foods and Nutrition	9,10,11,12	0.50
International Foods	10,11,12	0.50
Child Development and Parenting	10,11,12	0.50
Foreign Languages		
FLEX (Foreign Language Exploratory)	9,10,11,12	.50
French 1	9,10,11,12	1.00
French 2	10,11,12	1.00
French 3	11,12	1.00
Honors French 4	11,12	1.00
AP French 5 (DE)	12	1.00
Spanish 1	9,10,11,12	1.00
Spanish 2	10,11,12	1.00
Spanish 3	10,11,12	1.00
Honors Spanish 4	11,12	1.00
AP Spanish 5 (DE)	12	1.00

Course Offerings

COURSE	GRADE	CREDITS
Health Physical Education and Swimming		
Health	9	0.50
Beginners Swimming 9	9	0.25
Intermediate Swimming 9	9	0,25
Advanced Swimming 9	9	0.25
Physical Education	10,11,12	0.25
Life Guard Training	10,11,12	025
Exploring Fitness Systems	10, 11, 12	0.25
Aerobic Fitness	10, 11, 12	0.25
Partners Physical Education	10,11,12	0.25
Functional Training for Sports	10,11,12	0.25
Competitive Sports	10,11,12	0.25
Mathematics		
Traditional Math Classes		
Algebra 1B	9	1.00
Algebra 1	9	1.00
Algebra 2	9,10,11	1.00
Geometry	10,11	1.00
Algebraic Concepts/Trigonometry	11,12	1.00
Integrated Math for the Workforce	12	1.00
Academic Math Classes		
Academic Algebra 2	9,10,11	1.00
Academic Geometry	10,11	1.00
Academic Trigonometry/Pre-Calculus	11,12	1.00
Probability & Statistics	12	1.00
Calculus	12	1.00
Honors Math Classes		
Honors Algebra 2	9,10	1.00
Honors Geometry	10	1.00
Honors Trigonometry/Pre-Calculus	11	1.00
AP Calculus AB (DE)	12	1.00
AP Calculus BC	12	1.00
AP Statistics (DE)	11,12	1.00

Course Offerings

Course	Grade	Credits
Music		
Ninth Grade Chorus	9	1.00
Elizabeth Forward Chorus	10,11,12	1.00
Warrior Choir	11,12	1.00
Music History	10,11,12	0.50
Introduction to Music Theory and Beginning Piano	9,10,11,12	0.50
Advanced Music Theory and Piano	9,10,11,12	0.50
Ninth Grade Band	9	1.00
Symphonic Wind Ensemble	10,11,12	1.00
Jazz Ensemble	9,10,11,12	1.00
String Ensemble	9,10,11,12	1.00
Percussion Ensemble	9,10,11,12	1.00
Chamber Music	10,11,12	0.50
Remediation		
Keystone Algebra I Tutorial	9,10,11	0.50
Keystone Biology Tutorial	9,10,11	0.50
Keystone Literature Tutorial	9,10,11	0.50
Reading Strategies	9,10,11,12	1.00
Science		
Biology	9	1.00
Honors Biology	9	1.00
Applied Chemistry	10	1.00
Academic Chemistry	10	1.00
Honors Chemistry	10	1.00
Digital Electronics and Robotics (PLTW)	9,10,11,12	1.00
Applied Physics	11	1.00
Academic Physics I	11	1.00
Honors Physics	11	1.00
Academic Physics II	12	1.00
Environmental Science	11,12	1.00
Honors Anatomy and Physiology	11,12	1.00
AP Biology (DE)	11,12	1.00
AP Chemistry (DE)	11,12	1.00
AP Physics C (DE)	12	1.00
Warrior Bots 10	10,11,12	1.00
Warrior Bots 11	11,12	1.00
Warrior Bots 12	12	1.00

Course Offerings

Course	Grade	Credits
Social Studies		
Modern Western Civilization	9	1.00
U.S. History	10	1.00
World Cultures	11	1.00
American Government	12	0.50
Economics	12	0.50
Sociology	12	0.50
Psychology	11,12	0.50
AP U.S. History (DE)	10	1.00
AP European History (DE)	11,12	1.00
AP World History (DE)	11,12	1.00
Special/Other Courses		
AP Capstone Seminar	10,11,12	1.00
AP Capstone Research	11,12	1.00
Drivers' Education Theory	9,10,11,12	0.25
Study Skills	9,10,11,12	0.50 or 1.00
Media Center Internship	10,11,12	0.50
Multimedia Production	10,11,12	1.00
Print Media Productions	10,11,12	1.00
SAT Test Preparation	11,12	.50
Senior Work Experience	12	1.00-3.00
Technology Education		
Material Processing I	9,10,11,12	0.50
Material Processing II	9,10,11,12	0.50
Transportation Systems	9,10,11,12	0.50
Manufacturing	10,11,12	0.50
Construction and Building Processes	10,11,12	0.50
Maker Lab	9,10,11,12	1.00
Introduction to Engineering and Design (DE) (PLTW)	9,10,11,12	1.00
Principles of Engineering (DE) (PLTW)	10,11,12	1.00
Architectural Drawing/CAD	9,10,11,12	0.50
CAD	9,10,11,12	1.00
Introduction to Engineering and Design	9,10,11,12	1.00
Graphic Technologies	9,10,11,12	0.50
Digital Media	9,10,11,12	0.50
Technology Entrepreneurship (The ISH Company)	10,11,12	1.00

Course Offerings

Course	Grade	Credits
Visual Arts		
Exploring Visual Design	9,10,11,12	0.50
Basic Studio Art	10,11,12	1.00
Partners in Art	10,11,12	1.00
Intermediate Studio Art	11,12	1.00
Pop, Abstract, and Modern Art	9,10,11,12	0.50
Advanced Studio Art	12	1.00
Beginning Painting	10,11,12	0.50
Ceramics	9,10,11,12	0.50
Advanced Ceramics	11,12	0.50
Honors Ceramics or Independent Ceramics	11,12	0.50 - 1.00
Three-Dimensional Design and Crafts	10,11,12	0.50
Technical Education is offered in cooperation with the Steel Center Area Vocational-Technical School.		
Advertising & Design	11, 12	3.00
Automotive Mechanics	11, 12	3.00
Baking/Pastry Chef	11, 12	3.00
Building Trades	11, 12	3.00
Carpentry	11, 12	3.00
Collision Repair and Refinishing	11, 12	3.00
Computer Information Systems	11, 12	3.00
Cosmetology	10, 11, 12	3.00
Culinary Arts	11,12	3.00
Electrical Construction	11, 12	3.00
Health Assistants	10,11, 12	3.00
Heating, Air Conditioning, and Refrigeration	11, 12	3.00
Medium/Heavy Truck	11, 12	3.00
Protective Services	11, 12	3.00
Retail food Merchandising and Production	11,12	3.00
Welding	11,12	3.00

Business, Computer, and Information Technology/Computer Science

Faculty:

Ryan Brain

Kelly Kearns

Mary Wilson

Philosophy:

Because society and technology are forever changing, the BCIT Department offers a curriculum designed to prepare students for life skills that will be utilized in future academic endeavors as well as provide the foundation of those everyday living skills that will make students successful functioning members of society. Furthermore, we believe that the information technology strand in business programs requires substantial application of core content standards, specifically in English and Math as we prepare students for the many phases of their academic, career, and personal lives. Therefore, this department includes several rigorous computer science electives. Elizabeth Forward supports the K-12 Computer Science Framework which states that students should “develop a foundation of computer science knowledge and learn new approaches to problem solving that harness the power of computation thinking to become both users and creators of computing technology.” The overall goals are to cover computing systems, the Internet, data, algorithms, programming, and the impact of computing and foster strong communication, collaboration, and computational thinking practices.

Suggested Computer Science Course Selections:

Computer Science / STEM career interest:		Gaming interest:
Honors Python Programming (9 th)	Python Programming (9 th or 10 th)	GameMaker Programming I (9 th or 10 th)
AP CS Principles (10 th)	Java Programming (10 th or 11 th)	GameMaker Programming II (9 th or 10 th)
AP Computer Science / CHS Intermediate Java (11 th or 12 th)	AP CS Principles (10 th or 11 th)	Python Programming (10 th or 11 th)
CHS CS-Web Site Design, App Development with Swift, or GameMaker Programming I (11 th or 12 th)	AP Computer Science / CHS Intermediate Java, CHS CS-Web Site Design, App Development with Swift, or GameMaker Programming I (11 th or 12 th)	Unity 3D Programming, CHS CS-Web Site Design, Gaming Internship, AP CS Principles (11 th or 12 th)

COURSE TITLE	<i>Python Programming</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Strong computer background is recommended and successful completion of Algebra 1 with a final grade of 80% or better</i>	One of the required 9th grade computer science options	9,10,11,12
DESCRIPTION	The job market for software and app developers is projected to grow annually through 2020, and at a rate as high as 37% for app developers. Do you want to have the computer do what you tell it to do? Do you want to create a practical application or an entertaining game? Do you like to apply your analytical and problem solving skills? If so, this course is for you and will provide an introduction to programming and problem solving experiences using Python, a language that is fun to use. As a creator and not simply a user of technology you can enhance your ability to make a difference in a global society. Python Programming will provide a strong foundation for other programming languages. This class will also introduce students to computational thinking and developing algorithms.		

Business, Computer, and Information Technology

COURSE TITLE	<i>Honors Python Programming</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Currently enrolled in Honors Math or completion of Academic Algebra II with a final grade of 80% or better</i>	One of the required 9th grade computer science options	<i>9,10,11,12</i>
DESCRIPTION	This honors-level course is designed to introduce students to coding using the Python programming language. There is an emphasis on critical thinking, problem solving, and creativity. Specific topics include functions, variables, expressions, conditionals, loops, strings, lists, graphics, animations, classes, and debugging. Skills in computational thinking and creating algorithms will be developed. Students will also complete a project using the Hummingbird Robotics kit. This is a College-in-High School (CHS) course offered through the University of Pittsburgh at a reduced tuition rate.		

COURSE TITLE	<i>Java Programming</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of Python Programming with a final grade of 70% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	A semester course using Java to improve programming and problem-solving skills. The focus of the course is on program analysis and the development of algorithms and computer programs in a modern high –level language. This course is recommended for students interested in engineering, computer science, or gaming. Students may elect to earn college credit upon successful completion by enrolling in the CS0007 Introduction to Computer Programming College-In-High-School (CHS) course offered through the University of Pittsburgh at a reduced tuition rate. This course is a prerequisite for AP Computer Science A for students who have not taken Honors Python.		

COURSE TITLE	<i>CHS CS-Web Site Design & Development</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of ElizaByte or Python Programming with a final grade of 80% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This semester course provides motivated and academically prepared students to take college level course work and exams while in high school. Students may elect to earn college credit upon successful completion by enrolling in a College-In-High-School (CHS) course offered through the University of Pittsburgh at a reduced tuition rate. Topics include HTML, Web site maintenance with Dreamweaver, JavaScript, Web site layout and design techniques, and Internet search engine analysis.		

COURSE TITLE	<i>AP Computer Science Principles</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Algebra I with a final grade of 80% or better or successful completion of GameMaker Programming or Python Programming with a final grade of 80% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course was added by the College Board in 2016. This full-year elective course will introduce you to creative problem solving, critical thinking, and real-world applications as you study foundational concepts of computer science. You will expand your knowledge of the global impact of computer innovations and engage in creative design opportunities as you create digital artifacts. Students will complete two performance assessments throughout the year and may elect to take the AP Computer Science Principles exam in May.		

Business, Computer, and Information Technology

COURSE TITLE	<i>AP Computer Science A/CHS Intermediate Java</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful Completion of Honors Python or Java Programming with a final grade of 80% or better</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	This full-year Advanced Placement elective course emphasizes object-oriented programming methodology, problem-solving, data structures, and algorithm development using the Java programming language. Topics include effective programming practices, Java objects, writing classes, sort and search algorithms, graphical applications, and inheritance. This course is recommended for students who are considering majoring in a Computer Science related field upon entering college. This is a College-in-High School (CHS) course offered through the University of Pittsburgh at a reduced rate.		

COURSE TITLE	<i>App Development with Swift</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of one programming course with a grade of 75% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course is designed to help you build a solid foundation in programming fundamentals using Swift as the language. Throughout this course, you'll get practical experience with the tools, techniques, and concepts needed to build a basic iOS app from scratch. You'll also learn user interface design principles, which are fundamental to programming and making great apps. You will become proficient with Xcode, the development environment used to create apps for the Apple platform.		

COURSE TITLE	<i>Building Bridges to My Future</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	MANDATORY	<i>9</i>
DESCRIPTION	What do you want to do for a living? What is your future career goal? The purpose of this course will focus on exploring your academic and future career goals while guiding you towards making the proper course selections to direct you towards goal attainment. Emphasis will be placed on career planning, self-assessments, trends in society, decision-making, goal setting and the power of a positive attitude. Through a collaboration with ImaginePittsburgh.com, a community development organization aimed at creating a more competitive business climate and marketing in the Pittsburgh region for investments, job creation and talent, the students will research the five fastest growing career clusters in the Pittsburgh region. Five separate projects will then be uploaded to each student's digital portfolio that will continually be developed as they progress towards graduation. Course may include career exploration.		

COURSE TITLE	<i>The ElizaBYTE Academy</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	One of the required 9th grade computer science options	<i>9</i>
DESCRIPTION	Did you know computers do not just run off of magic; that they run off of intelligent systems that you can learn to write programs for! In ElizaBYTE Academy, you will be introduced to new software tools, programming languages involving robots, interface and web design, learn how computers actually work, and societal and ethical issues. You will not only be consumers of technology, but creators using the most recent technological tools. Many of the topics covered will be done in collaborative teams where you can test and create new programs all while learning how to problem solve and delve into real-world technology as a team.		

Business, Computer, and Information Technology

COURSE TITLE	<i>Computer Keyboarding</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	Students will be given an in-depth reexamination of the computer keyboard with strong emphasis on the alphabetic keys and proper keyboarding techniques along with a review of mouse skills. Students will be encouraged to develop accuracy and speed to the highest degree possible (40-45 wpm). Current software available to enhance keyboarding efficiency will also be introduced. This course is strongly recommended for students who have not yet attained proficiency of their touch keyboarding skills.		

COURSE TITLE	<i>Sports Marketing and Entrepreneurship</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This is a semester course that combines two important business concepts. Half of the course will be focused on the students owning and running their own small business. They will learn the importance of the small business for our economy, the value of the free market system and the opportunities of entrepreneurship as a career. The students will choose a company that they would one day like to create and compete a detailed business plan for that company. The entrepreneurship aspect of the course will provide a strong foundation for all aspects of business administration. One of those aspects is marketing. Therefore, a strong emphasis will be placed on the importance of marketing. The students will learn the importance of marketing by presenting key marketing concepts using real examples from the sports and entertainment industry. Market research, demographics, promotion, advertising, endorsements, pricing, and public relations are all key aspects that will be studied.		

COURSE TITLE	<i>Investing and Personal Finance</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	Major economic decisions will be made continuously throughout your life. Prepare yourself to save, invest, and spend for the future. Everyone is affected by the stock market in some way. Learn about stocks, bonds, mutual funds, investing strategies, and "The Rule of 72." Everyone has the ability to meet his/her financial goals. This class will show you how to invest for your future. Students will participate in the "Internet Stock Market" game. They will be given \$100,000 to invest using real time stock quotes. Students will compete with classmates and students around the country to see how much they can earn. Other topics covered will be life insurance, interest rates, banking, mortgages, real estate, financing a new automobile, and retirement plans such as 401Ks, IRAs, 529 plans, and annuities.		

COURSE TITLE	<i>Accounting 1</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course provides a basic understanding of the principles of accounting. Emphasis is placed on developing a better comprehension of business economic terms and conditions as they apply to a business. Students will be able to complete the accounting cycle for a service business formed as a proprietorship. They will also be able to complete a basic tax return as they understand terminology related to payroll and income taxes. The course provides a strong foundation and is highly encouraged to students wishing to major in Business Administration or any of the business disciplines.		

Business, Computer, and Information Technology

COURSE TITLE	<i>Accounting 2</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Accounting 1 with a grade of 70% or better</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	This course is a continuation of Accounting 1 where applications of basic principles are used to increase the student's knowledge of accounting forms, procedures, and financial statements. Accounting 2 expands into accounting procedures for a merchandise business, detailed payroll, valuing inventory, depreciation, and uncollectable accounts. An additional unit will be understanding federal taxes and completing Tax returns 1040 and 100EZ.		

COURSE TITLE	<i>Business Law and the Legal Environment</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course will give students an introduction to law and its application to everyday life. Students will develop and understanding of the concepts of law and society including criminal and civil law, trial procedures, torts, and contracts. Students planning to major in law, criminology or business administration are encouraged to take this course.		

COURSE TITLE	<i>Business Law and the Consumer Environment</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	Topics will review the principals and practices of law relating to consumerism. It will give students an in-depth understanding of topics such as employment contracts, buying a home, insurance protection, consumer protection, and banking. Students planning to major in law, criminology, or business administration are encouraged to take this course.		

English

Faculty

James Coll
Justin Plansinis
Amanda Spada

Jennifer Spiegel
Kathy Vasko
Tara Wemyss

Alana Wieclaw

Philosophy:

The Philosophy of the English Department is to enhance the reading, writing, speaking, listening, viewing, and research skills of our students by exposing them to a variety of genres and cultures through the study of literature. Students will draw connections between the literature and their world while broadening their vocabularies and honing their analytical and critical thinking skills. Our goal is to foster the next generation of lifelong readers, writers, speakers, and thinkers. Reading courses are offered for students on a supplemental basis. Working with the English teachers, the reading teacher helps support struggling readers in their English classes and remediate students so that they are performing at or near grade level.

COURSE TITLE	English 9	CREDIT VALUE	1.00 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	9
DESCRIPTION	The primary focus of this course will be a literature study designed to foster critical reading and thinking, discussion, and written response. Two novels and a drama are required readings. Various short stories, both fiction and nonfiction, will be included. Students are encouraged to think for themselves, build independent study habits, budget their time wisely, and tolerate conflicting ideas and/or opinions. When responding in writing to various elements of the literature, students will be encouraged to establish a clear focus, exhibit clarity and logic in thought development, adhere to grammar rules, and maintain coherent organization while writing in various modes. Across all units of study, students will be active participants in research, reading, writing, speaking, and listening experiences.		

COURSE TITLE	Pre-AP English 9 (Honors)	CREDIT VALUE	1.00 Credit
PREREQUISITE	Successful completion of Language Arts (grade 8) with a final grade of 90% or better	OPEN TO GRADE(S)	9
DESCRIPTION	This course emphasizes critical reading, research analysis, and composition. Individual works and units of specific genre will be considered for structure, meaning, theme, characterization, and, where applicable, for contemporary value. Writing in various modes will be a major part of the course. Grammar, usage, and mechanics will be correlated with the study of literature and composition to incorporate a variety of writing types. This class is also designed to enhance discussion skills. Students will be expected to analyze, formulate, and support ideas in both oral and written form. Students are encouraged to think for themselves, build independent study habits, budget their time wisely, and tolerate conflicting ideas and/or opinions. Three novels, two dramas, and various short stories in fiction and nonfiction will be included. A summer reading assignment is required.		

COURSE TITLE	English 10	CREDIT VALUE	1.00 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	10
DESCRIPTION	In this course, students will study World Literature, taking a multi-cultural approach toward reading, writing, and language study. Students will gather and analyze ideas, organize their thinking, and express themselves fluently in both spoken and written forms. Students will develop critical and analytical thinking skills through oral and written expression related to the readings for the course. MLA style will be discussed, presented, and required for all writings within the various units of the course. (Practice in mastering writing styles and reading analysis skills for state required exams will also be incorporated.)		

English

COURSE TITLE	<i>Pre-AP English 10 (Honors)</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Pre-AP English 9 (Honors) with a final grade of 80% or better, or a final grade of an 90% or better in English 9</i>	OPEN TO GRADE(S)	<i>10</i>
DESCRIPTION	<p>This course is designed for the talented and serious academic student who is willing to rise to the challenge of intense and in-depth work in literature. This course requires critical discriminatory reading and intensive work in literary interpretation, analysis, and composition reflecting a variety of writing styles. Communications skills are enhanced through group discussions and brief oral presentations. A documented literary research paper analyzing an independently read novel is required. Students in this course will study an array of literature, as the course is organized into multi-cultural units of study. (Practice in mastering writing styles and reading analysis skills for state required exams will also be incorporated) A summer reading assignment is required.</p>		

COURSE TITLE	<i>English 11</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>11</i>
DESCRIPTION	<p>In this course students will study American Literature with a sequential development of composition skills. The course covers poetry, the short story, the essay, and novels. The material ranges from the Puritan Period through the beginnings of Realism and Naturalism and the Modern Period. Students will be introduced to contemporary literature, which reflects the current attitudes, mores, and philosophies relevant to society today. A composition strand will generate fully documented themes, which require research for completion.</p>		

COURSE TITLE	<i>Honors English 11</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Pre-AP English 10 (Honors) with a final grade of 80% or better or a final grade of 90% or better in English 10</i>	OPEN TO GRADE(S)	<i>11</i>
DESCRIPTION	<p>This course takes a thematic approach to the study of American Literature, focusing on novels, short stories, historical documents, nonfiction, and poetry. Students will be encouraged to discuss individual works, to react to them orally and in writing, and to respond to other interpretations made by their peers and literary critics. Writing will include literature-based exposition, analytical works requiring research, and creative endeavors. Students will also write bimonthly personal, evaluative, and/or critical journal responses based on topics discussed in class. A summer reading assignment is also required.</p>		

COURSE TITLE	<i>AP English 11 Language and Composition</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Pre-AP English 10 (Honors) with a final grade of 80% or better</i>	OPEN TO GRADE(S)	<i>11</i>
DESCRIPTION	<p>This course is designed for students who have demonstrated advanced skills in reading and writing. Organized in thematic units, the course will focus on fiction and non-fiction written by American writers and focusing on elements of the American culture. Students will hone their skills as both critical readers and writers as they study various forms of prose and rhetoric. Emphasis will be placed on writing for various audiences and purposes as students develop a vast writing portfolio. Analytical, expository, argumentative, reflective writing and others will be addressed in the course. Students will analyze material from literary critics and utilize it to support their own unique written thesis statements. This course provides the proper background for taking the AP Language and Composition Examination at year's end, which is highly recommended.</p> <p>This is offered as a College-In-High School (CHS) course in affiliation with a local college/university for optional college credit. A summer reading assignment is required.</p>		

English

COURSE TITLE	English 12	CREDIT VALUE	1.00 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	12
DESCRIPTION	Beginning with the Anglo-Saxon epic poem, <i>Beowulf</i> , students will explore several periods of British Literature culminating with the Modern novels, <i>Lord of the Flies</i> , and <i>Frankenstein</i> . Students will delve into the Renaissance by studying poetry and the Shakespearean plays, <i>Macbeth</i> and <i>A Midsummer Night's Dream</i> . By reflecting on the historical events of the period, students will discover the history's influence on the development of the English language and its literature. Reading, writing, listening, and speaking skills will be enhanced with special emphasis on the transformation and interpretation of literature and through analytical and reflective writing. Class discussions, reading comprehension quizzes, unit tests, oral readings and interpretations, in-class and out-of-class themes, and creative writings will be utilized for evaluation purposes.		

COURSE TITLE	Honors English 12	CREDIT VALUE:	1.00 Credit
PREREQUISITE	Successful completion of Honors English 11, or AP English 11 with a final grade of 80 % or better, or a final grade of 90% or better in English 11	OPEN TO GRADE(S)	12
DESCRIPTION	This course takes both a thematic and sequential approach to the exploration of British Literature and the development of the English language. Students will explore the development of the English language through critical reading, writing, and analysis of novels, epic poetry, poetry, and drama. Students are encouraged to compare their interpretations of literary work with those of their classmates and literary critics. This course continues the rigor established in previous Honors/AP English classes. Major works for consideration include <i>Frankenstein</i> , <i>Lord of the Flies</i> , <i>Wuthering Heights</i> , <i>Beowulf</i> , <i>LeMorte D'Arthur</i> , <i>The Canterbury Tales</i> , <i>Life of Pi</i> , and several Shakespearean plays. A summer reading assignment is required.		

English

COURSE TITLE	<i>AP English 12 Literature and Composition</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Honors English 11 or AP English 11 with a final grade of 80% or better</i>	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION	<p>This course is designed for a limited number of students who have demonstrated reading and writing skills comparable to those expected in an introductory college-level course. Critical reading and analysis of literature are stressed with emphasis placed on language, characterization, situation, and themes. Individual works are considered for their structure, meaning, value, and significance to contemporary experience as well as to the times in which they were written. Students are involved in correlating individual works discussed in class with supplementary readings. They are encouraged to compare their reactions to literary works with those of their classmates and of literary critics. This course also requires the study and practice of writing, which emphasizes concise and effective use of language, coherent organization of ideas, and objectivity. AP English attempts to teach students how to read works of literature and how to express themselves about those works.</p> <p>This course provides the proper background for taking the AP Literature and Composition Examination at year's end, which is highly recommended.</p> <p>This is offered as a College-In-High School (CHS) course in affiliation with a local college/university for optional college credit. A summer reading assignment is required.</p>		

English Electives

These English Elective Courses may not be substituted for English Requirements.

COURSE TITLE	<i>Creative Writing</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This course will improve not only the student's ability to write creatively, but also their writing skills in general. Students will establish their own writer's toolbox that will encompass a deep exploration in the use of senses, emotions, life experiences, and a variety of literary devices. This writer's toolbox will become the foundation in which to draw when developing short stories and poems. The elements of a story, its shape and editing, and the overall potential for publishing of an original work will be the focus of the course throughout the semester.		

COURSE TITLE	<i>Public Speaking</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course is designed to help students build confidence in preparing and delivering various types of speeches. Students in this class will be able to recognize and understand the basic principles of communication and will develop skills in selecting and researching speech topics, outlining, and delivering speeches to entertain, inform, and persuade. Basic propaganda techniques are discussed during the persuasive speech unit. To encourage and strengthen listening skills, students will provide brief critiques of speeches given by fellow classmates. A final unit of the course provides an opportunity to expand basic skills in the oral interpretation of literature.		

COURSE TITLE	<i>Mythology</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	Edith Hamilton's <i>Mythology</i> and the textbook <i>Classical Mythology</i> will be used to read and analyze the Greek and Roman <i>myths</i> about creation, nature, love and heroism. Homer's epic, <i>The Iliad</i> , will challenge the best readers with its detail. Some of the plays of Aeschylus and Euripides will provide a thorough look at classic Greek Tragedy. The study of these classics will acquaint the student with some of the most famous stories of all time. By studying these myths of Greek and Roman gods and their relationship with men, students not only see the beginnings of drama but man's attempt to explain his universe and his relationship to it. It is recommended that only the avid reader attempt the course. Much of the reading is college-level material.		

COURSE TITLE	<i>Theatre Arts</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Involvement in the Cast, Crew, or Pit Musical Program Recommended</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course provides students with a look into the art of theatre. The course will center around the high school's spring musical. Class work will include set design, painting, prop preparation, choreography, vocal and music preparation and a look into special effects. Participants learn basic acting techniques and will perform monologues and scenes. Musical critiques will also be written in class as well as other analytical papers focusing on theatre.		

English Electives

COURSE TITLE	<i>Film Studies</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	In this full-semester course, students will be exploring the history of cinema, from the beginning of the silent movie era, through the development of sound, the rise of the studio system, the evolution of famous auteurs, and the factors that led to the current blockbuster era. Because contemporary films serve as the most significant touchstones in the understanding of culture, character and morality, the critical analysis of these ideas will serve students well in the real world. Students will come to understand the historical context that influenced each film, the economic factors that drive their production, and the film techniques that affect the viewer on a fundamental level. Additionally, through the viewing, studying, discussing, and writing about film, students will develop and demonstrate skills in cultural, technological, and media literacy.		

COURSE TITLE	<i>Irish Literature</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course will primarily focus on the important literary figures that Ireland has produced in the twentieth century from James Joyce to Seamus Heaney. Students will examine the historical influence of the Irish Literary Revival and its effects on writers such as W.B. Yeats, John Millington Synge, and Sean O'Casey. The students will also explore the influences of Celtic mythology and many other aspects of Irish cultural identity. Assignments include analytical essays and oral reports on Irish authors, poets and playwrights. It is recommended that only the avid reader attempt this course. Much of the reading is college-level-material.		

Entertainment Technology Academy

Faculty

Alexis Dombrowsky

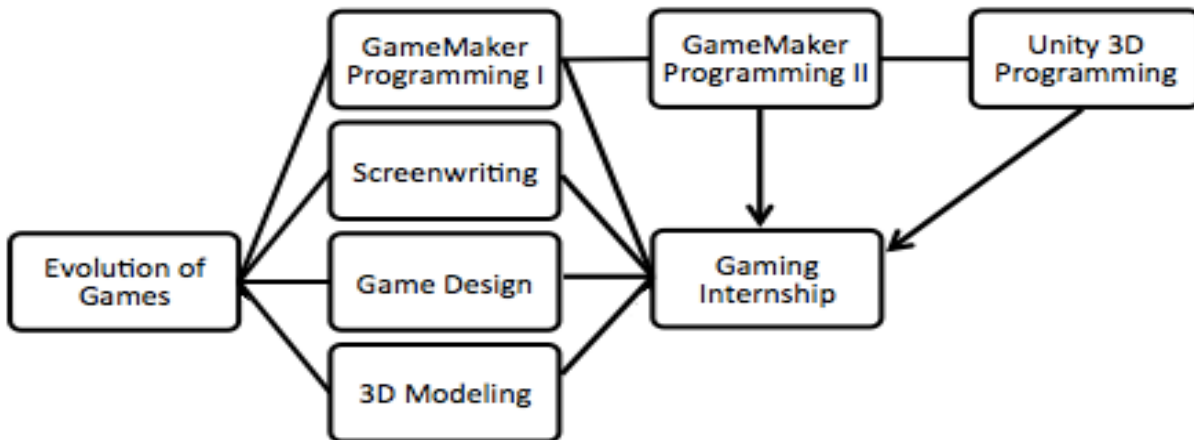
Megan Smith

Mary Wilson

The Elizabeth Forward School District has partnered with the Entertainment Technology Center at Carnegie Mellon University and the company Zulama to provide a program that teaches cutting-edge game-creation technology to high school students. The program combines Science, Technology, Engineering and Math (STEM) with the Arts to give students the skills and creativity they will need to thrive in the new global digital workplace. All students start with the *Evolution of Games* prerequisite course and then students can pick one or more tracks to continue in the program. The tracks include the following: programming, storytelling and digital art tracks.

Philosophy:

The Entertainment Technology Academy's overall goal is to foster leadership in education and research that combines technology and fine arts to create new processes, tools, and vision for storytelling and entertainment.



COURSE TITLE	<i>Evolution of Games</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11</i>
DESCRIPTION	Today's professional game designers understand and implement dynamics from many different types of games in their blockbuster hits. In this course, you'll explore ancient cultures, their games, and how they designed games using available technology and resources. You will find out more about the benefits game playing has within a society. You will prototype and play games as well as get hands-on experience creating your own original game.		

Entertainment Technology Academy

COURSE TITLE	<i>GameMaker Programming I</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	One of the required 9th grade computer science options	<i>9,10,11,12</i>
DESCRIPTION	Learn to code by building and playing 2D games. GameMaker Studio, the 2D engine you'll be using, is based on a scripting language that builds techniques that can be transferred to other coding languages such as Python and Java. You will have the opportunity to express your creativity, art, design, problem-solving, and computational thinking skills to create games that can be played with friends and added to your digital portfolio.		

COURSE TITLE	<i>GameMaker Programming II</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of GameMaker Programming I with a 70% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course is a continuation of GameMaker™ Programming I. You will explore complex 2D programming concepts such as animated sprites, user interfaces and feedback, and views. Learn how to build increased difficulty into games and explore advanced data structures including maps and dictionaries. You will finish complete stand-alone executable games that can be played with friends and added to your digital portfolio.		

COURSE TITLE	<i>Unity 3D Programming</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of GameMaker Programming II with a 70% or better or successful completion of Gamemaker Programming with a 90% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	Are you ready to take your programming skills into the next dimension? Learn how to create dynamic Unity 3D games using the same industry standard development engine as professionals. You will learn the Unity interface and JavaScript and will create two fully executable games that can be played on many platforms and added to your digital portfolio.		

COURSE TITLE	<i>Screenwriting</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of Evolution of Games with a final grade of 70% or better</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	Why do we cry at movies? Or cheer? Why do thrillers put us on the edge of our seats? This course will help you understand, critique, and write dramatic stories for modern media including movies, games and television. You'll develop skills in creative writing, awareness, provisional acting, collaborative storytelling, and creative self-confidence as you craft your own original story.		

COURSE TITLE	<i>Game Design</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of Evolution of Games with a final grade of 70% or better</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	"Gaming" doesn't only mean video games. Gamers also play board games, card games, simulations, and participate in interactive stories. This course breaks down the design process step by step. You will learn the fundamentals through hands-on modding, prototyping, and iteration of a variety of games. Your final project will include building, play - testing, and revising your own original game that can be played with friends and added to your game portfolio.		

Entertainment Technology Academy

COURSE TITLE	3D Modeling	CREDIT VALUE	0.50 Credit or 1.00
PREREQUISITE	Successful completion of Evolution of Games with a final grade of 70% or better	OPEN TO GRADE(S)	9,10,11,12
DESCRIPTION	Learn the 3D modeling techniques used in movies, visual effects, video games, cartoons, commercials, and animation! Using 3Ds Max, you will work in this highly skill-based art form to manipulate and sculpt pure imagination into substantial forms. By the end of the course, you will have developed a portfolio of original projects that you can use when applying for an internship, higher education, or job. Students will also have access to a 3D printer to make their ideas come to life.		

COURSE TITLE	Gaming Internship	CREDIT VALUE	0.50/1.0 Credit
PREREQUISITE	Teacher recommendation, successful completion of two full semesters of gaming courses beyond Evolution of Games and application to indicate experience with game design, programming, digital art, and story telling.	OPEN TO GRADE(S)	11,12
DESCRIPTION	Students will have the opportunity to work with Real World clients across the Pittsburgh area to create products. Projects will be determined and agreed upon by the client and the student team and may be a website, app, video game, or combination of items. Student teams will be created based on skills in computer programming, digital art, and storytelling. Students will work interdependently. Students will meet with external clients, playtest their products, and create a marketing plan.		

Family & Consumer Science

Faculty

Christopher Weibl

Philosophy:

The Family and Consumer Science Department is dedicated to providing students the necessary skills and competencies to become well-rounded and self-sufficient adults.

COURSE TITLE	<i>Intro to Foods</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	Intro to Foods is a basic introduction to preparing simple recipes such as pastries, desserts, breads and eggs. The course focuses on cooking terminology and unit measurements commonly found within the kitchen. Students will participate in a lab approximately every 2 weeks to strengthen their understanding of the current topics covered in class.		

COURSE TITLE	<i>Foods and Nutrition</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful Completion of Intro to Foods</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This course emphasizes the nutritional aspect of food and lead students toward making healthy food choices in school, the grocery store and restaurants. Students will participate in a lab approximately every 2 weeks to strengthen their understanding of the current topics covered in class. The students of this course will also participate in a Thanksgiving Day Celebration if taken first semester or a Barbeque if taken second semester.		

COURSE TITLE	<i>International Foods</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful Completion of Foods and Nutrition</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	International foods will study foods and dining traditions of various countries around the world such as Italy, Asia, Mexico and others. Students will participate in a lab approximately every 2 weeks to strengthen the understanding of the current topics covered in class.		

COURSE TITLE	<i>Child Development and Parenting</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course focuses on the study of children from conception through their first year of life. It encompasses the physical, emotional, social, and mental growth during that important first year. Childcare emphasizes the need for teenagers to be responsible mature adults before parenting should even occur. Discussions include conception, the mother's health and well-being during pregnancy, nutritional needs of mother and child, childbirth, and children's issues such as health standards, safety concerns, and abuse and neglect. This course is important to students interested in careers that involve working with children and social services, as well as to all prospective parents.		

Foreign Languages

Faculty

Shawna Boden
Alexis Dombrowsky

Christina Mediate
Amy Thurston

Philosophy:

The Foreign Language Department's overall goal is to provide students with a foundation of the target language and culture while developing a general insight into how languages work. This is done in a way as to allow and encourage further studies here or abroad. Our classes are carefully aimed to give students four (4) abilities:

1. To function in a target language speaking country
2. To use the language for a lifetime of personal enjoyment
3. To recognize the role that French and Spanish speaking countries play in the world
4. To further increase the knowledge and skills of the language for general world communication and the work place

COURSE TITLE	FLEX (Foreign Language Exploratory)	CREDIT VALUE	.50 Credit
RECOMMENDATION	Students with a strong foundation of the English Language but are not sure of which foreign language they wish to pursue in high school and have a desire to develop a cultural appreciation and ability to speak either French or Spanish	OPEN TO GRADE(S)	9,10,11,12
DESCRIPTION	Students will have the opportunity to explore the culture, geography, contributions and language of the French and Spanish speaking worlds. Nine weeks will be dedicated to each language giving the students a strong foundation on which to build in Level 1. Topics may include but are not limited to, the alphabet, greetings, numbers, months, days, colors, subjects, verbs, gender of nouns, adjective agreement, as well as culturally applicable material.		

COURSE TITLE	French 1	CREDIT VALUE	1.00 Credit
RECOMMENDATION	Students shall have a strong foundation of the English Language	OPEN TO GRADE(S)	9,10,11,12
DESCRIPTION	Welcome to the exciting world of French 1. French 1 students will focus upon aural and oral development, with an equal emphasis on writing skills. Students will begin speaking French on the first day of school, learning how to respond to basic questions. During the year, they will converse using appropriate vocabulary and grammar to express greetings, introductions, farewells, and activities involving family and friends, food, shopping, traveling, and sports.		

COURSE TITLE	French 2	CREDIT VALUE	1.00 Credit
PREREQUISITE	Successful completion of French 1 with a final grade of 70% or better	OPEN TO GRADE(S)	10,11,12
DESCRIPTION	Students will continue to improve upon the skills learned in French 1 with emphasis on listening, speaking, reading, and writing. They will continue to acquire new vocabulary in the areas of weather, clothing, health, sports, culture, banking, and travel. As they continue to learn new vocabulary and grammar skills, their fluency and comprehension will improve, with the expectation of speaking in full complete sentences.		

Foreign Languages

COURSE TITLE	<i>French 3</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of French 2 with a final grade of 70% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	At this level, students will actually begin to “speak” and “understand” the language. Speaking skills will continue to advance, and students will understand the patterns of the language showing them to communicate more readily. Reading and writing skills will also improve by incorporating French in skits, plays, songs, short stories, etc. Students will be expected to create and present short speeches and dialogues in the target language. There is a major focus on grammar and verb conjugation in French 3.		

COURSE TITLE	<i>Honors French 4</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of French 3 with a final grade of 80% or better</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	At this level, French is treated as a “core subject” in which the fields of English, art, music, literature, history, geography, and technology are correlated. Students will continue to improve their listening, speaking, reading, and writing skills, and classroom discussion is primarily in French. This level also stresses self-expression and creativity in French. The students will begin a comprehensive writing program.		

COURSE TITLE	<i>AP French 5 (DE)</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>(1) Students must have completed French 4 with an 80% or better. (2) G.P.A. of 3.5 in the discipline for levels 1-4 and G.P.A. of 3.0 overall</i>	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION	French 5 is a culmination of the student’s previous four years of language. At this intense level, major emphasis is placed on increased fluency in communication and the students’ ability to use what they’ve learned in the past to express themselves. Students are exposed to French art, history, pop-culture and modern drama and humor. Students produce a large variety of original work, entirely in French. They will learn to think and react “en francais” often without needing any English at all. Students are encouraged to take the AP French Language test. This course may be a College-in-High-School (CHS) course offered through an affiliation with a local college/university for optional college credit.		

COURSE TITLE	<i>Spanish 1</i>	CREDIT VALUE	<i>1.00 Credit</i>
RECOMMENDATION	<i>Students should have a strong foundation of English Grammar</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	Spanish 1 is an introduction to the language and culture of the Spanish-speaking world. Students are expected to speak and write in Spanish from the first day of class. Spanish I students become familiar with greetings, introductions, exchanging personal information, discussing school and free time activities, describing family as well as other introductory vocabulary. Cultural connections are made throughout the course. Spanish I students begin to develop speaking, writing, reading and listening skills in the Spanish language. Spanish 1 students should expect daily practice of the language, as well as weekly assignments that must be completed outside the of the classroom. Class participation is an integral part of language learning and is required. Many students who take a foreign language plan to attend college.		

Foreign Languages

COURSE TITLE	<i>Spanish 2</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Spanish 1 with a final grade of 70% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	<p>Spanish 2 continues to focus on speaking, writing, reading and listening skills. Fluency and comprehension increase as students continue utilizing vocabulary and grammatical knowledge learned in Spanish 1. Spanish 2 students become familiar with the real world connections to the language, such as talking about shopping, ordering in a restaurant, getting around town, completing house hold chores and describing a home, planning a party, and talking about sports and health. Cultural connections are made throughout the course. Spanish 2 students should expect daily practice of the language, as well as weekly assignments that must be completed outside of the classroom. Class participation is an integral part of language learning and is required. Many students who take a foreign language plan to attend college.</p>		

COURSE TITLE	<i>Spanish 3</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Spanish 2 with a final grade of 70% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	<p>Spanish 3 refines speaking, writing, reading and listening skills. Fluency and comprehension increase as students continue utilizing vocabulary and grammar learned in Spanish 1 and 2. Students ask and answer questions using multiple verb tenses and use them to communicate about travel, vacation, sports and health, daily routines, and shopping. Cultural connections are made throughout the course. Spanish 3 students should expect daily practice of the language, as well as weekly assignments that must be completed outside of the classroom. Class participation is an integral part of language learning and is required. Many students who take a foreign language plan to attend college.</p>		

COURSE TITLE	<i>Honors Spanish 4 (DE)</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Spanish 3 with a final grade of 80% or better</i>	OPEN TO GRADE(S)	<i>11, 12</i>
DESCRIPTION	<p>Spanish 4 uses speaking, reading and writing and listening to continue learning more advanced grammar structures and discussion topics. Students are able to use several tenses as they ask and respond to questions about themselves and others. Students communicate about going camping, going to the beach, volunteering and social work, discussing environmental concerns and social awareness and talking about careers. Cultural connections are made throughout the course. Class participation is an integral part of language learning and is required. Spanish 4 is of great value to students who will take a college-level foreign language course.</p> <p>This course may be a College-in-High-School (CHS) course offered through an affiliation with a local college/university for optional college credit.</p>		

Foreign Languages

COURSE TITLE:	<i>AP Spanish 5 (DE)</i>	CREDIT VALUE:	<i>1.00 Credit</i>
PREREQUISITE:	<p><i>(1) Students must have completed Spanish 4 with a final grade of 80% or better.</i></p> <p><i>(2) G.P.A. of 3.5 in the discipline for levels 1-4 and G.P.A. of 3.0 overall</i></p>	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION:	<p>Speaking, reading, listening and writing proficiency continues to be the goal of Level 5. Most classroom discussion and activities are in Spanish. Student-intensive discussion encourages self-expression and improves fluency and vocabulary building. This both a writing intensive and speaking-intensive course. Students are able to use proper tenses, transitional words, and complex sentences, both orally and in written themes, as they polish mechanics and content. Class participation is an integral part of language learning and is required.</p> <p>Students are encouraged to take the AP Spanish Language test.</p> <p>This course may be a College-in-High-School (CHS) course offered through an affiliation with a local college/university for optional college credit.</p>		

Health / Physical Education / Swimming

Faculty

Tammy Blackwood

David Byers

Kristy Kivador

Philosophy:

The mission of the Elizabeth Forward Senior High School Health and Physical Education Department is to promote healthy living. When individuals are in good health, they have the energy to enjoy life and pursue their dreams. Students will be taught the benefits of making healthy choices and practicing healthful behaviors. Our focus will be to promote wellness, increase knowledge, and encourage the practice of a healthy lifestyle.

COURSE TITLE	Health	CREDIT VALUE	0.50 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	9
DESCRIPTION	This course is required of all ninth grade students. It emphasizes the three dimensions of human health and development: physical, emotional, and social. The interrelationships of these three areas are examined through the study of such topics as nutrition, physical fitness, AIDS, drug abuse, mental health, and related areas. The course also focuses on the study of the different systems of the body, first aid, and safety.		

COURSE TITLE	Beginners Swimming 9	CREDIT VALUE	0.25 Credit
PREREQUISITE	Swimming is a required course for all 9th grade students to meet graduation requirements.	OPEN TO GRADE(S)	9
DESCRIPTION	This course exposes individuals who have no aquatic ability to water safety skills in order to make them reasonably safe while in or around the water. The students will move through a series of skills designated by the American Red Cross. Pace is established in accordance with individual needs with instructor's guidance. This class meets five (5) periods per week.		

COURSE TITLE	Intermediate Swimming 9	CREDIT VALUE	0.25 Credit
PREREQUISITE	Students should be able to swim the length of the pool. Swimming is a required course for all 9^h grade students to meet graduation requirements.	OPEN TO GRADE(S)	9
DESCRIPTION	This course provides individuals with the opportunity to advance their swimming skills. Also, students should be somewhat confident in the water. Skills included with the course are freestyle, backstroke, elementary backstroke, and diving. Lap swimming will be included as part of a fitness component in the course. This class meets five (5) periods per week.		

COURSE TITLE	Advanced Swimming 9	CREDIT VALUE	0.25 Credit
PREREQUISITE	Students must be able to swim four lengths (100 yards) and be able to swim five (5) minutes continuously. Swimming is a required course for all 9th grade students to meet graduation requirements.	OPEN TO GRADE(S)	9
DESCRIPTION	This course provides the individual instruction on the four competitive swimming strokes and various swimming skills and techniques. Lap swimming will be included as part of a fitness component in the course. This class meets five (5) periods per week.		

COURSE TITLE	Physical Education	CREDIT VALUE	0.25 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	10,11,12
DESCRIPTION	This is an 18-week course. This program is taught on a coeducational basis to meet Pennsylvania state requirements. Through participation in various team and individual sports, games, and conditioning activities, the student develops physical fitness, stamina, coordination, self-confidence, sociability, and initiative in conjunction with particular skills. Carry-over sports for adult leisure time are also included. (Any 10 th , 11 th or 12 th grader who		

has not fulfilled the swimming requirement will be scheduled for swimming, as well.)

Health / Physical Education / Swimming

COURSE TITLE	<i>Lifeguard Training</i>	CREDIT VALUE	<i>0.25 Credit</i>
PREREQUISITE	<i>Students must be 15 years of age, perform a 500 yard swim, swim to the depth of the deep water (14 feet) retrieve a 10 lb. brick, and tread water for three (3) minutes using no hands</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course provides individuals with knowledge and skills to save their own lives or the life of another in the event of an emergency. Components of the course are CPR for the professional rescuer (adult, child, and infant) and basic First Aid and Rescue techniques. Students who meet and pass course requirements will have the opportunity to become an American Red Cross certified lifeguard. Participants in this course will be required to pay a fee of approximately \$90.00 for materials required and provided by the American Red Cross. This course fulfills the physical education requirements for each year taken in 10 th , 11 th , and 12 th grade.		

COURSE TITLE	<i>Exploring Fitness Systems</i>	CREDIT VALUE	<i>0.25 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course introduces the maintenance and development of a healthy body. Students are introduced to weight training, aerobics, nutrition, and proper eating habits. The program will be built around a student's self-assessment, program assessment, and the development of a personal program to fit individual needs. The objective of the course is to develop positive life long fitness habits. This course fulfills the Physical Education requirement for one year.		

COURSE TITLE	<i>Aerobic Fitness</i>	CREDIT VALUE	<i>0.25 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course introduces the basic concepts of many different individual aerobic based exercises. Students will be encouraged to try new and exciting cardio vascular activities. Activities include but are not limited to walking, step aerobics, video body sculpting and more. This course fulfills the physical education requirement for each year taken in 10 th , 11 th , and 12 th grade.		

COURSE TITLE	<i>Partners Physical Education</i>	CREDIT VALUE	<i>0.25 Credit</i>
PREREQUISITE	<i>Placement according to needs</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	The aim of Partners Physical Education is to provide, through competent leadership, a diversified program of developmental activities, games, sports, and rhythms suited to the interests, capacities, and limitations of students with disabilities who may not safely or successfully engage in unrestricted participation in the vigorous activities of the general physical education program.		

Health / Physical Education / Swimming

COURSE TITLE	<i>Functional Training for Sports</i>	CREDIT VALUE	<i>0.25 Credit</i>
PREREQUISITE	<i>Students must participate in EFSD Sponsored Sport or Club</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	Students who take this course will reach a higher level of athleticism. The course will focus on training the whole body the way it will be used during competition. Detailed exercise progressions and training will help students' develop the movement skills, body positions, and explosive power necessary to excel at his or her sport. Students will improve their total athleticism, enhance their performance, and reduce injuries through sport appropriate exercise progressions. Proper nutrition tips and concussion awareness will also be taught. Training progressions will focus on improving speed, power, quickness, agility, balance, strength, flexibility, coordination, and reaction time. Each student-athlete that participates in this course will earn an EF Warrior "Athlete in Training" T-Shirt at the end of the course.		

COURSE TITLE	<i>Competitive Sports</i>	CREDIT VALUE	<i>0.25 Credit</i>
PREREQUISITE	<i>None, but any student who participates in a EFHS sponsored sport or club would enhance each students' performance in the class, Designed for junior varsity and varsity athletes</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This class is designed to prepare students for interscholastic sports and other highly competitive sporting events. The following areas will be covered: health-related fitness testing, skill-related fitness testing, dynamic and static stretching programs, individual and team sports and games. Competitions and tournaments will be set up for each game or sport.		

Mathematics

Faculty

Sean Browne
Sara Cope
Janet Dykstra

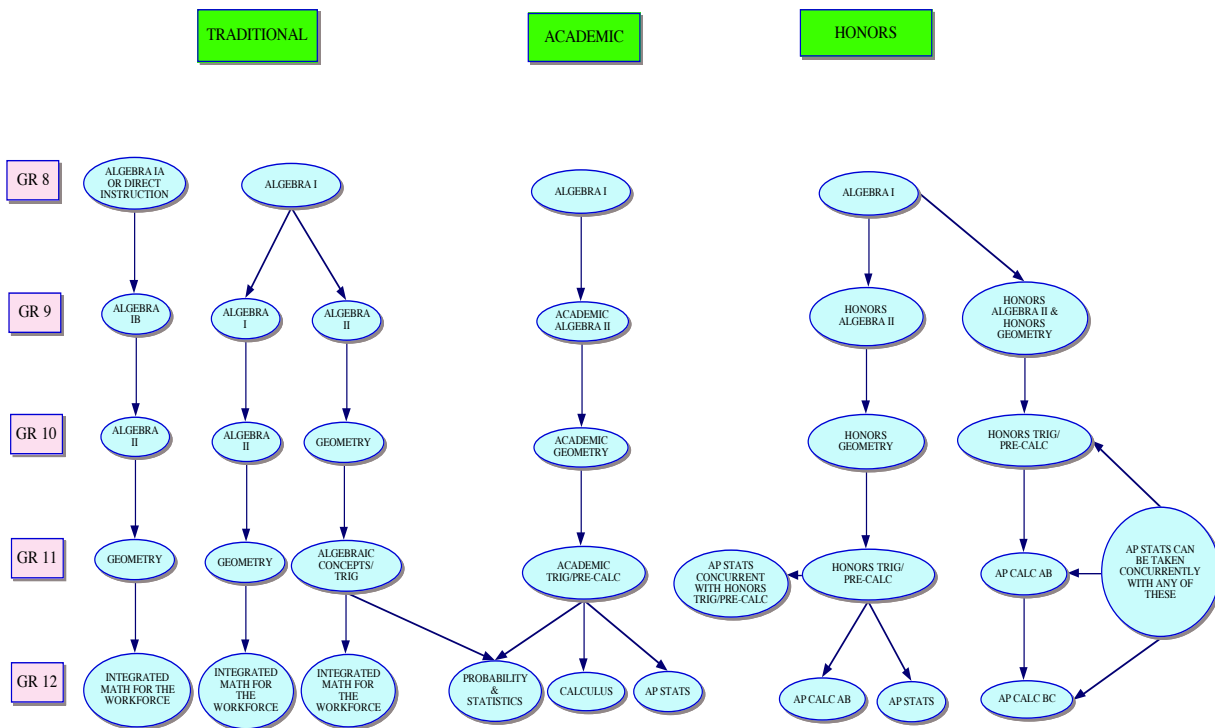
Lawrence Feick
Christy Galilei
Diane Hough

Justin Korona
Kameron Smith

Philosophy:

The Mathematics Department implements a rigorous college and career prep curriculum for all students. This will require **all students to complete four (4) years of math**. The instruction at the high school incorporates multiple representations in various forms including concrete/pictorial, verbal/written, numerical/tabular, graphical and symbolic/algebraic expressions.

MATH FLOW CHART



Mathematics

COURSE TITLE	<i>Algebra 1 B</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Completion of Algebra 1A (grade 8)</i>	OPEN TO GRADE(S)	9
DESCRIPTION	This course is a continuation of Algebra 1 A and will focus on the Algebra Keystone standards. Students will learn to represent functions in multiple ways: verbally, equations, tables and graphs. Systems of equations and inequalities will be solved algebraically and graphically. The course will also focus on operations with real numbers and polynomial expressions. In addition, Algebra I B will include probability and data analysis. Students will take the Algebra Keystone at the end of the school year.		

COURSE TITLE	<i>Algebra 1</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Completion of Algebra 1 (grade 8) with a final grade of 69% or lower</i>	OPEN TO GRADE(S)	9
DESCRIPTION	This traditional course in Algebra 1 will cover patterns, variables, expressions, equations, and graphing. The students will add, subtract, multiply, and divide real numbers, variables, and expressions. Equations will be solved, and proportions, percent, and probability will be studied. Students will graph equations and inequalities and study laws of exponents and scientific notation. Problem-solving applications and critical-thinking skills will be developed. Along with the content, students will focus on Keystone preparation tasks such as test-taking skills and answering open-ended questions		

COURSE TITLE	<i>Algebra 2</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Algebra 1 with a final grade of 70% or better grade 8 or a final grade of 60% or better in high school</i>	OPEN TO GRADE(S)	<i>9,10,11</i>
DESCRIPTION	This is a traditional course and will reinforce and remediate the skills of Algebra 1 by more extensive work in factoring, solving linear equations, fractions, and real numbers. The concepts of square roots, cube roots, and fourth roots; introduction and development of solutions of quadratic equations; graphs of lines and their equations; the fundamental concepts of functions; and systems of equations and inequalities will be covered.		

COURSE TITLE	<i>Academic Algebra 2</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Algebra 1 (grade 8) with a final grade of 75% or better, or teacher recommendation</i>	OPEN TO GRADE(S)	<i>9,10</i>
DESCRIPTION	This course is designed for the student who wishes to continue the study of high school mathematics through Academic Trigonometry/Pre-Calculus. The topics include analyzing, solving and graphing linear equations, inequalities, functions, and systems of equations and inequalities. Other topics covered are polynomials functions and factoring, complex numbers, solving higher degree polynomials, rational functions, radial functions and exponential functions.		

Mathematics

COURSE TITLE	<i>Honors Algebra 2</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Algebra I (grade 8) with a final grade of 85% or better</i>	OPEN TO GRADE(S)	<i>9,10</i>
DESCRIPTION	<p>This course is offered to the student who wants to continue in the study of advanced mathematics. Topics covered are Polynomial Functions and Factoring, Complex Numbers, Solving Higher Degree Polynomials, Rational Functions, Radical Functions, and Exponential Functions and Data Analysis.</p> <p>Note: A TI-84+ graphing calculator is highly recommended.</p>		

COURSE TITLE	<i>Geometry</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Algebra 2</i>	OPEN TO GRADE(S)	<i>10,11</i>
DESCRIPTION	<p>This course has a balance of theory and application. Students will study postulates, theorems, and definitions of geometric concepts. Algebra skills will be reviewed and strengthened through geometry problem solving. Topics covered are essentials of geometry, angles, reasoning and proofs, perpendicular and parallel lines, congruent triangles, special properties of triangles, quadrilaterals, similarity, right triangles and trigonometry, circles, perimeter and area of plane figures, and surface area and volume. .</p>		

COURSE TITLE	<i>Academic Geometry</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Academic Algebra 2 with a final grade of 75% or better or Teacher recommendation</i>	OPEN TO GRADE(S)	<i>10,11</i>
DESCRIPTION	<p>This course is designed for the student who wishes to continue the study of high school mathematics through Academic Trigonometry/Pre-Calculus. Topics covered are essentials of geometry, angles, reasoning and proofs, perpendicular and parallel lines, congruent triangles, special properties of triangles, quadrilaterals, similarity, right triangles and trigonometry, circles, area of polygons and circles, perimeter and area of plane figures, and surface area and volume.</p>		

COURSE TITLE	<i>Honors Geometry</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Honors Algebra 2 with a final grade of 80% or better, or successful completion of Academic Algebra 2 with a final grade of 90% or better.</i>	OPEN TO GRADE(S)	<i>10</i>
DESCRIPTION	<p>This course is offered to the student who wants to continue in the study of advanced mathematics. Postulates, theorems, definitions, and proofs are a vital part of this course which includes the language and logic of geometry, parallelism and quadrilaterals, congruent triangles and similar polygons, inequalities in triangles, right triangles, circles, area of polygons and circles, areas and volumes of solids and coordinate geometry.</p> <p>Note: A TI-84+ graphing calculator is highly recommended.</p>		

COURSE TITLE	<i>Algebraic Concepts and Trigonometry</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Geometry</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	<p>This is a traditional course in algebra and trigonometry. A logical approach to the study of the circular functions and the mechanics of working with these functions in the various systems of mathematics.</p>		

Mathematics

COURSE TITLE	<i>Academic Trigonometry/ Pre-Calculus</i>	CREDIT VALUE:	<i>1.00 Credit</i>
PREREQUISITE	Successful completion of Honors Geometry with a final grade of 80% or better, or successful completion of Academic Geometry with a final grade of 90% or better.	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	This course covers advanced concepts of algebra such as composite functions, rational and radical functions, quadratic equations and inequalities. Trigonometry is then explained and triangles are solved using the Laws of Sines and Cosines. Trigonometric functions and their inverses are studied and graphed. Students will learn and apply trig identities to solve trig equations, and exponential and logarithmic equations will be solved.		

COURSE TITLE	<i>Honors Trigonometry/Pre-Calculus</i>	CREDIT VALUE:	<i>1.00 Credit</i>
PREREQUISITE	Successful completion of Honors Geometry with a final grade of 80% or better	OPEN TO GRADE(S)	<i>11</i>
DESCRIPTION	This course is for college-bound students who plan on pursuing a math-related career. Students in this course will cover advanced concepts of algebra such as composite functions, and quadratic equations and inequalities. Trigonometry is then explained and triangles are solved using the Laws of Sines and Cosines. Trigonometric functions and their inverses are studied and graphed. Students will learn and apply trig identities to solve trig equations, and exponential and logarithmic equations will be solved. Note: A TI-84+ graphing calculator is highly recommended.		

COURSE TITLE	<i>Probability and Statistics</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	Successful completion of Algebraic Concepts/Trig with a final grade of 80% or better, or Successful completion of Academic Trig/Pre-Calculus	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION	This course places an emphasis on students to be able to draw conclusions from data, become more statistically literate, have a better understanding of the logic of hypothesis testing, and work with raw data as well as summary data.		

COURSE TITLE	<i>Integrated Math for the Workforce</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	Successful completion of Algebra I, Algebra II, Geometry AND Teacher Recommendation	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION	In this course, students will explore algebraic thinking patterns and functions. This course is an application-based learning approach incorporating Algebra I, Algebra II, and Geometry topics. Also, this course encourages students to be actively involved in applying mathematical ideas to their everyday lives. Teacher recommendation is required.		

Mathematics

COURSE TITLE	AP Statistics	CREDIT VALUE	1.00 Credit
PREREQUISITE	Successful completion of Honors Geometry with 90% or better with concurrent enrollment in Honors Trigonometry/Pre Calculus or Successful completion of Academic Trigonometry/Pre Calculus with 85% or better or successful completion of Honors Trigonometry/Pre-Calculus with 80% or better	OPEN TO GRADE(S)	11,12
DESCRIPTION	Students in AP Statistics are exposed to four broad conceptual themes: exploring data and observing patterns and departures from patterns, planning a study and deciding what and how to measure, anticipating patterns and producing models using probability theory and simulation, statistical inferences and confirming models. Students will be instructed in a variety of topics ranging amongst these four conceptual themes. This course follows the strict guidelines in the College Board Publication of the Advanced Placement Course Description for preparation of the AP Statistics Advanced Placement examination. Note: A TI-84+ graphing calculator is highly recommended.		

COURSE TITLE	Calculus	CREDIT VALUE	1.00 Credit
PREREQUISITE	Successful completion of Academic Trigonometry/Pre-Calculus with a final grade of 80% or better, or Honors Trigonometry/Pre-Calculus with a final grade of 70% or better	OPEN TO GRADE(S)	12
DESCRIPTION	Plane analytic geometry and solid analytic geometry are studied intensively and then integrated with differential and integral calculus. In addition to the mechanics of differential and integral calculus, the mean value theorem, the fundamental theorems of differential and integral calculus, and ordinary and uniform continuity are emphasized. Limit theory and application of differential calculus are also studied.		

COURSE TITLE	AP Calculus AB	CREDIT VALUE	1.00 Credit
PREREQUISITE	Successful completion of Honors Trigonometry/Pre-Calculus with a final grade of 80% or better or Academic Trigonometry/Pre-Calculus with a final grade of 85% or better	OPEN TO GRADE(S)	12
DESCRIPTION	An Analytical Geometry and Calculus course has been developed in conjunction with Seton Hill University and can qualify a student for college credit through the College-in-High-School Program. Plane analytic geometry and solid analytic geometry are studied intensively and then integrated with differential and integral calculus. In addition to the mechanics of differential and integral calculus, the mean value theorem, the fundamental theorems of differential and integral calculus, and ordinary and uniform continuity are emphasized. Limit theory and application of differential calculus are also studied. This course follows the strict guidelines in the College Board Publication of the Advanced Placement Course Description for preparation of the AP Calculus AB Advanced Placement examination. Note: A TI-84+ graphing calculator is highly recommended.		

Mathematics

COURSE TITLE	<i>AP Calculus BC</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of AP Calculus AB and teacher recommendation.</i>	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION	AP Calculus BC is the second course in single-variable calculus that would be equivalent to a second semester calculus course at most colleges and universities. This course will provide a deeper understanding of the concepts of limits, continuity, derivatives, and integrals, which were covered in AP Calculus AB. The major new topics covered in AP Calculus BC are Parametric, polar and vector functions; slope fields, Euler's method; L'Hopital's Rule; Improper Integrals; Logistic differentiable equations; Polynomial approximations and series; and Taylor Series. Each of these topics is approached via the "Rule of Four", with activities that emphasize expressing mathematics from graphical, numerical, analytical, and verbal representations. This course follows the strict guidelines in the College Board Publication of the Advanced Placement Course Description for preparation of the AP Calculus BC Advanced Placement examination. Note: A TI-84+ graphing calculator is highly recommended. This course is also available for college credit (CHS through Seton Hill University).		

Music

Faculty

Angela Milliren

Steven Spang

Philosophy:

"Bringing Academics to Life through Creative Performance"

The goal of the Music Department is to foster creativity in the student body while maintaining focus on four (4) areas of music education set forth by the Department of Education.

1. Music literacy blends dynamic and tempo terminology in foreign languages with the mathematical ability to read a musical chart .
2. The second area understands the foundations of the composition and the history behind it.
3. The third aspect of music is the ability to critique one's own work as well as the work of other performer's.
4. The last area is to ensure the students can identify the powerful psychological impact of music.

COURSE TITLE	<i>Ninth Grade Chorus</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9</i>
DESCRIPTION	Ninth Grade Chorus provides an opportunity for the entering freshman to learn proper pedagogy and music theory through singing. There are concerts that occur throughout the year and attendance is mandatory . Vocal evaluations will occur periodically throughout the nine-week periods.		

COURSE TITLE	<i>Elizabeth Forward Chorus</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Ninth Grade Chorus with a 80% or better or teacher approval</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	E.F. Chorus allows students to continue the pedagogical and theoretical studies of Ninth Grade Chorus. There are concerts that occur throughout the year and attendance is mandatory . Vocal evaluations will occur periodically throughout the nine-week periods.		

COURSE TITLE	<i>Warrior Choir</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Elizabeth Forward Chorus with an 90% or teacher approval</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	Warrior Choir is designed for the advanced choral student to sing challenging vocal literature. Vocal production and mastery of choral techniques will be emphasized through individual learning in the classroom and on the concert stage. Vocal evaluations will occur periodically throughout each nine-week period. There are concerts that occur throughout the year and attendance is mandatory .		

COURSE TITLE	<i>Music History</i>	CREDIT VALUE	<i>.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course will discuss music history from beginning of written music through the 20 th century. Included in this course are topics such as The Middle Ages, The Jazz Era, History of Rock n' Roll, Broadway, and composers such as Beethoven and Mozart.		

COURSE TITLE	<i>Introduction to Music Theory and Beginning Piano</i>	CREDIT VALUE	<i>.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	Students will learn basic music theory and keyboarding basics beginning with the basic elements of pitch, rhythm, and written notation. Students with no prior experience in ensembles or private lessons should begin this course before enrolling in Advanced Music Theory and Piano.		

Music

COURSE TITLE	<i>Advanced Music Theory and Piano</i>	CREDIT VALUE	<i>.50 Credit</i>
PREREQUISITE	<i>Intro to Music Theory and Beginning Piano or Instructor Permission</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	Students will learn music theory beginning with concepts of harmony, rhythm, transcription and harmonic analysis. Students will also work on developing piano skills starting with basic duets and continuing to some ability based solo repertoire. Students must either complete the introduction to Music Theory and Beginning Piano course prior to enrollment or obtain instructor permission to enroll in this course.		

COURSE TITLE	<i>9th Grade Band</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Previous Instrumental Experience</i>	OPEN TO GRADE(S)	<i>9</i>
	The 9th Grade Band is open to 9 th grade students interested in continuing with the band program in high school. The objective of this band class is to provide additional, more focused instruction to the freshmen of the Elizabeth Forward band program. The band will reinforce musical knowledge through a wide range of musical styles and composers by way of studying a variety of classical band works, marches, and popular music. The 9 th Grade Band will perform multiple concerts throughout the school year in addition to Graduation and the Commencement ceremonies. Other festivals and community performances may be added from year to year at the discretion of the director.		

COURSE TITLE	<i>Symphonic Wind Ensemble</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Previous Instrumental Experience</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
	The Symphonic Wind Ensemble is open to all students in grades ten through twelfth enrolled in the Elizabeth Forward Band Program. The objective of this band is to strive for the highest possible musical achievement through the performance of intermediate to advanced band literature. The band will reinforce and master it's musical knowledge through a wide range of musical styles and composers by way of studying a variety of classical band works, marches, and popular music. The Symphonic Band typically performs multiple concerts a year and at Graduation and Commencement ceremonies. Other festivals and community performances may be added from year to year at the discretion of the director.		

COURSE TITLE	<i>Jazz Ensemble</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Current enrollment in another EFHS performing Ensemble or Director permission</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	Students will have the opportunity to play and perform music in the jazz, big band, funk, and Latin idiom. The ensemble will perform multiple concerts during the school year including festivals at colleges and universities. Improvisation is encouraged, as it is an essential part of these styles. Students must be enrolled in this ensemble to audition for the Latin Ensemble that rehearses after the school day. In extenuating circumstances, students not enrolled in another ensemble at EFHS may obtain director permission to participate in this group.		

Music

COURSE TITLE	<i>String Ensemble</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Teacher recommendation and/or successful completion of Introduction to Strings</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This class is designed to provide students the opportunity to further their skills on the instruments of the string family: violin, cello, viola, and string class. Each student will be required to declare a “master” instrument for either the semester or for the entire year. The students will prepare both solo pieces and ensemble pieces throughout the year. This class will require the students to participate in four evening performances and numerous after-school rehearsals.		

COURSE TITLE	<i>Percussion Ensemble</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Teacher recommendation and/or current enrollment in another EFHS performing ensemble</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	Percussion Ensemble is open to all students who are currently enrolled in and EFHS performing ensemble and/ or receive teacher recommendation to join this course. The objective of this course is to strive for the highest possible musical achievement through the performance of music specifically written for percussion ensemble. These students will also participate in concerts with the Symphonic Wind Ensemble.		

COURSE TITLE	<i>Chamber Music</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Current enrollment in EFHS performing ensemble</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	Students will be grouped in several different ensembles in this class ranging from duet pairings to larger instrument oriented groups to experience chamber music repertoire written for their particular instrument. Students will also begin working on solo literature to prepare for semester and final year juries. Any student looking to audition for honors ensembles through PMEA or similar organizations should seriously consider this course. Students desiring to continue into a collegiate music department at any level should also heavily consider this course.		

Remediation

COURSE TITLE	<i>Keystone Algebra 1 Tutorial</i>	CREDIT VALUE	<i>.50 Credit</i>
PREREQUISITE	<i>Scoring Less than Proficient on Keystone Exams</i>	OPEN TO GRADE(S)	<i>9,10,11</i>
DESCRIPTION	This course is designed to support students in achieving success on the Keystone Algebra I Exam. During this semester course, the students will improve their skills in both modules. Module 1 will cover Operations and Linear Equations and Inequalities. Module 2 will cover Linear Functions and Data Organizations.		

COURSE TITLE	<i>Keystone Biology Tutorial</i>	CREDIT VALUE	<i>.50 Credit</i>
PREREQUISITE	<i>Scoring Less than Proficient on the Keystone Exams</i>	OPEN TO GRADE(S)	<i>10,11</i>
DESCRIPTION	This course is designed to support students in achieving success on the Keystone Biology Exam. It is a semester long course where students will review the 8 major principles of Biology which are the Basic Biology Principles, the Chemical Basics for Life, Bioenergetics Homeostasis and Transport, Cell Growth and Reproduction, Genetics, Theory of Evolution and Ecology.		

COURSE TITLE	<i>Keystone Literature Tutorial</i>	CREDIT VALUE	<i>.50 Credit</i>
PREREQUISITE	<i>Scoring Less than Proficient on Keystone Exams</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	This course is designed to support students who scored less than proficient on the Keystone Literature exam in grade 10. This course will focus on improving reading comprehension, spelling, vocabulary, and other skills that will help students strive for proficiency before attempting to re-take the Keystone Literature Exam in grade 11. Students will review supplementary pieces of text chosen by the instructor as part of state-required remediation efforts. Students will work to strengthen their literary analysis skills as they identify figurative language elements in literary fiction. They will also work on their analysis of literary nonfiction and the identification of rhetorical strategies used in persuasion. Students will be enrolled in this course if they score basic or below on the state exam in grade 10.		

COURSE TITLE	<i>Reading Strategies</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Placement According to Need</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This course is designed to support students who are having difficulty reading at grade level. The goal of this course is to have students develop better reading strategies and improve comprehension. Instruction will be differentiated to address a student's individual needs using instructional software and high interest fiction/nonfiction materials. Systematic direct instruction in reading skills, vocabulary, writing, and grammar will be included. Students will work in small groups, independently, and one-on-one with the teacher. Students may be in the course for more than one year.		

Science

Faculty

Sean Browne
Frank Champ
Michael Day

Vicki Jackson
Amanda Lynn
Malena Mazurek

Jaison Moon
Tim Wesolowski
Steffani Zuraw

Philosophy:

The Elizabeth Forward Science Department is committed to developing in our students the skills necessary to make the connections between classroom learning and real-world application to help comprehend and appreciate the natural world. Our goal is to expose students to the various fields of science and scientific study to foster scientific literacy. By focusing on the following criteria, we aim to equip students with the necessary skills to succeed in the twenty-first century:

Development of critical thinking and problem solving skills

Development and utilization of written and oral communication

Exposure to the use of modern technology and the latest laboratory techniques

Importance and use of mathematics in science

Use of the scientific method and the ability to analyze data

Importance of teamwork

Importance of personal responsibility

COURSE TITLE	Biology	CREDIT VALUE	1.00 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	9
DESCRIPTION	<p>The course content is reflective of the state standards and anchors used to design the Biology Keystone exam. Topics emphasized include (1) The Cell: types, structure, organelles, functions, processes, communication, and reproduction; (2) Genetics: Mendelian genetics with all problem types, modern genetic studies and research, genetic diversity, and protein synthesis; (3) Evolution: The Big Bang to the evolution of modern humans; (4) Kingdoms of Life: bacteria, protozoans, fungi, plants, and animals; (5) Ecology: examine the interactions of populations, communities, ecosystems, and biomes and examine the effects of human interventions. This course serves as an introduction to the science program and will cover the same material as Accelerated Biology but at a slightly slower pace.</p> <p>* Students have the right to refuse to dissect, vivisection, incubate, capture, or otherwise harm or destroy animals or any parts thereof as part of their course instruction.</p>		

COURSE TITLE	Honors Biology	CREDIT VALUE	1.00 Credit
PREREQUISITE	Currently enrolled in Honors Algebra II, and successful completion of Pre-Biology (grade 8) with a final grade of 80% or better	OPEN TO GRADE(S)	9
DESCRIPTION	<p>The course content is reflective of the state standards and anchors used to design the Science PSSA exam and the Keystone exam. Topics emphasized include (1) The Cell: types, structure, organelles, functions, processes, communication, and reproduction; (2) Genetics: Mendelian genetics with all problem types, modern genetic studies and research, genetic diversity, and protein synthesis; (3) Evolution: The Big Bang to the evolution of modern humans; (4) Kingdoms of Life: bacteria, protozoans, fungi, plants, and animals; (5) Ecology: examine the interactions of populations, communities, ecosystems, and biomes and examine the effects of human interventions. Controlled Laboratory Experiences* will be combined and coordinated with an in depth content review. This is a challenging course designed as an introductory offering in the Honors Science Program. This course will have a scheduled lab period that meets once per week.</p> <p>* Students have the right to refuse to dissect, vivisection, incubate, capture, or otherwise harm or destroy animals or any parts thereof as part of their course instruction.</p>		

Science

COURSE TITLE	<i>Applied Chemistry</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>10</i>
DESCRIPTION	This course is designed to give students experience in observation, basic laboratory skills, and knowledge of how to analyze experimental data and generalize from it. Students will be introduced to the physical and chemical classification of matter and the periodic table as a means of organizing the elements and relating chemical properties to atomic structure. The students will also be introduced to writing and balancing chemical reactions that can be represented by chemical equations. The course will be based on chemical concepts, and requires basic math skills. Students will be involved in inquiry-based learning throughout the course.		

COURSE TITLE	<i>Academic Chemistry</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Academic Algebra II with a final grade of 80% or better, and a passing grade in Biology</i>	OPEN TO GRADE(S)	<i>10</i>
DESCRIPTION	Chemistry introduces the students to the composition, structure, properties, and behavior of matter, as well as the changes it undergoes during chemical reactions. These topics are covered through lectures, group work, laboratories, inquiry-based activities, and projects. Heavy emphasis is placed on logical thinking and problem-solving skills. Chemistry is a quantitative science, so students taking this course need to have a strong background in mathematics, specifically basic math and algebra, and have a scientific calculator.		

COURSE TITLE	<i>Honors Chemistry</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Algebra II with a final grade of 80% or better. Also successful completion of Honors Biology with a final grade of 80% or better, or successful completion of Biology with a final grade of 90% or better</i>	OPEN TO GRADE(S)	<i>10</i>
DESCRIPTION	Chemistry is defined as the branch of science, which is built upon the identification of the substances of which matter is composed, and the manners in which it interacts, combines and changes to form new materials. Through the course of study of chemistry, students explore the relationships between the properties and the structures of matter in terms of the atom and its subatomic particles, the periodic table of elements, chemical compounds and reactions, and ultimately, how to observe and measure these chemical phenomena through quantitative and qualitative analysis both in and out of the laboratory. High levels of mathematical skills are emphasized. Understanding of science content is enhanced when concepts are grounded in inquiry experiences. The use of scientific inquiry ensures that students develop a thorough understanding of these key concepts, processes, knowledge and understanding of scientific ideas, and the work of scientists. This course is intended for students who (a) have a good aptitude and interest in science and math, and (b) are willing to develop and practice independent study skills. This course is designed to prepare students for AP Chemistry and/or a college level chemistry course. A calculator and lab goggles are necessary for this course. (Students with poor math skills will find this course extremely difficult.)		

Science

COURSE TITLE	<i>Digital Electronics and Robotics (PLTW)</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Students must have a final grade of 80% or better in either their last scheduled science or math class</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	From smartphones to appliances, digital circuits are all around us. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational and sequential logic and are exposed to circuit design tools used in industry, including logic gates, integrated circuits, and programmable logic devices. This class will also explore projects that can be made using an Arduino microcontroller such as LED lightstrips, alarm systems with keyless entry and an autonomous fighting robot. During this course students will also work collaboratively with the Warrior Bots class and assist in building for the competition robots. This course is part of the Project Lead the Way curriculum. Please see www.pltw.org for more information.		

COURSE TITLE	<i>Applied Physics</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>11</i>
DESCRIPTION	Applied physics provides an introduction to the basic underlying principles that govern the physical universe and explores these principles through group work, discussion, laboratory experiences, and projects. It is presented on a conceptual level with a limited amount of mathematics. However, the class is designed for students who have some familiarity with the basic rules of algebra.		

COURSE TITLE	<i>Academic Physics I</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Currently taking Academic Trigonometry/Pre-calculus, successful completion of Applied Chemistry with a final grade of 90%, or a passing grade in Academic Chemistry</i>	OPEN TO GRADE(S)	<i>11</i>
DESCRIPTION	Physics provides an introduction to the basic underlying principles that govern the physical universe and an opportunity to meet these principles through group work, discussion, laboratory experiences, and projects. It is presented in a logical manner and is designed for students who plan to continue their education after high school. Mathematics is the language of physics; therefore, a strong mathematical background is needed for the course. A scientific calculator is a necessary tool for this course.		

COURSE TITLE	<i>Honors Physics</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>(1) Successful completion of Honors Geometry and Honors Chemistry with a final grade of 80% or better (2) Currently enrolled in Trigonometry/Pre-Calculus</i>	OPEN TO GRADE(S)	<i>11</i>
DESCRIPTION	Honors Physics provides an introduction to the basic underlying principles, governing the physical universe. Areas of study will include the mathematics of motion, Newton's laws of motion, the law of gravity, mechanical energy, and linear momentum. We will investigate these principles through discussions, multimedia activities, work groups, and laboratories. Mathematics is the language of physics. Therefore, a strong mathematical background is required for this course. A scientific calculator is necessary for this course. It is designed for students who plan to continue their education beyond high school.		

Science

COURSE TITLE	<i>Academic Physics II</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Academic Physics I, Honors Physics or Applied Physics with a final grade of 80% or better.</i>	OPEN TO GRADE(S)	<i>11</i>
DESCRIPTION	Physics 2 is a course designed for those students who would like to investigate topics in physics beyond those covered in the eleventh grade physics course. The course covers four main areas of study including engineering, astrophysics, vibrations and waves, light and sound, and electricity and magnetism. Students will gain a better understanding and appreciation for common physical phenomena that they experience in their everyday lives as well as the nature of the cosmos. Mathematics is the language of physics; therefore, a strong mathematical background is needed for the course.		

COURSE TITLE	<i>Environmental Science</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	Environmental Science is a multidisciplinary field that draws from all the sciences, as well as other fields, to help us better understand the relationship between humans and the world in which we live. Human interactions with the ecosystem and the results of human decisions are the main components of this academic area. Students will be introduced to topics such as Ecosystems and their interactions; Watersheds and Wetlands; Renewable and Nonrenewable Sources; Agriculture; Integrated Pest Management; Environmental Health; Laws and Regulations; and Threatened, Endangered, and Extinct Species. This course will allow students to be active participants and problem solvers in real issues that affect them, their homes, schools, and communities.		

COURSE TITLE	<i>Honors Anatomy and Physiology</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Biology with a final grade of 85%, or Honors Chemistry with a final grade of 80% or better, or Successful completion of Academic Chemistry with a final grade of 85% or better, or successful completion of Applied Chemistry with a final grade of 90% or better.</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	This course is designed to provide essential content to the student who is considering a career in an allied health field. This would include the following professions: doctor, pharmacist, nurse, radiology technician, nuclear medical technologist, laboratory technologist, physical therapist, emergency medical technologist, and mental health paraprofessional. Nonhuman (rats, pigs, cats) anatomy is thoroughly investigated through <u>extensive laboratory work*</u> involving dissection. (1 lab period a week) Comparisons and contrasts are then made to human anatomy. Fundamental biochemistry, extensive nomenclature, and principles of embryology are also included. This course can fulfill the senior year science requirement for accelerated science students. * Students have the right to refuse to dissect, vivisection, incubate, capture, or otherwise harm or destroy animals or any parts thereof as part of their course instruction.		

Science

COURSE TITLE	<i>AP Biology</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<p>(1) Successful completion of Biology with a final grade of 90 % or better, or successful completion of Honors Biology with a final grade of 85% or better.</p> <p>(2) An overall G.P.A. of 3.0 or better</p> <p>(3) Successful completion of Honors Chemistry with an 80% or better, or successful completion of Academic Chemistry with an 85% or better.</p>	OPEN TO GRADE(S)	11, 12
DESCRIPTION	<p>Advanced Placement Biology is a college-level course available to juniors and seniors who qualify as per the criteria stated above. The AP Biology course is designed to help students develop their advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing, data, applying mathematical routines, and connecting concepts in and across domains by emphasizing science practices.</p> <p>The science practices enable a student to establish lines of evidence and use them to develop and refine testable explanations and predictions of natural phenomena. Because content, inquiry and reasoning are equally important in AP Biology, each learning objective combines content with inquiry and reasoning skills described in the science practices.</p> <p>The key concepts and related content of AP Biology are organized around four underlying principles called the big ideas, which encompass the core of scientific principles, theories and processes governing living organisms and biological systems. There are required laboratory activities for each big idea. There is a summer assignment to be completed for the first day of class.</p> <p><u><i>Big Idea 1: Evolution</i></u> The process of evolution drives the diversity and unity of life.</p> <p><u><i>Big Idea 2: Cellular Processes: Energy and Communication</i></u> Biological systems utilize free energy and molecular building blocks to grow, reproduce, and to maintain dynamic homeostasis.</p> <p><u><i>Big Idea 3: Genetics and Information Transfer</i></u> Living systems store, retrieve, transmit, and respond to information essential to life processes.</p> <p><u><i>Big Idea 4: Interactions</i></u> Biological systems interact, and these systems and their interactions possess complex properties.</p> <p>* Students have the right to refuse to dissect, vivisect, incubate, capture, or otherwise harm or destroy animals or any parts thereof as part of their course instruction.</p> <p>This is offered as a College-In-High-School (CHS) course in affiliation with a local college/university for optional college credit.</p>		

Science

COURSE TITLE	AP Chemistry	CREDIT VALUE	1.00 Credit
PREREQUISITE	<p><i>(1) If taking as a junior, a final grade of 80% or better in Honors Chemistry or final grade of 90% in Chemistry</i></p> <p><i>If taking as a senior, a final grade of 80% or better in Honors Physics or a final grade of 90% or better in Physics</i></p> <p><i>(2) An overall G.P.A. of 3.0 or better</i></p>	OPEN TO GRADE(S)	11,12
DESCRIPTION	<p>Advanced Placement Chemistry is a college-level course available to students who have successfully completed a first-year chemistry course. The course differs qualitatively from the usual first-year course in chemistry with respect to the topics covered, the emphasis on chemical calculations, and the mathematical formulation of principles. Quantitative differences appear in the number of topics treated, the time spent on the course by the students, and the nature and variety of experiments done in the laboratory. The laboratory work incorporates both quantitative and qualitative experiments.(2 double lab periods weekly) The topics which will be covered in the course follow the Advanced Placement Chemistry, College Board, the 6 Big IDEA Frameworks and State Standards. A calculator and lab goggles are necessary for this course.</p> <p>This course provides the proper background for taking the Advanced Placement Examination at year's end, which is highly recommended.</p> <p>This is offered as a College-In-High-School (CHS) course in affiliation with a local college/university for optional college credit.</p>		

COURSE TITLE	AP Physics C	CREDIT VALUE	1.00 Credit
PREREQUISITE	<p><i>(1) Successful completion of Academic Physics I with a final grade of 90% or better, or successful completion of Honors Physics with a final grade of 85% or better</i></p> <p><i>(2) An overall G.P.A. or 3.0 or better</i></p> <p><i>(3) Currently enrolled in Calculus or AP Calculus</i></p>	OPEN TO GRADE(S)	12
DESCRIPTION	<p>Advanced Placement Physics is a college-level course available to seniors who qualify as per the criteria listed above. It is assumed that prospective students will possess the necessary skills in Advanced Algebra and Trigonometry to manage the rigorous quantitative aspects of the course. These aspects include solving word problems, data and graphical analysis, vector analysis, and a general understanding of variable relationships. Problem-solving and critical-thinking skills are a must. Calculus will be introduced in the theoretical development of some concepts such as quantities of motion, work, the law of gravity, and the laws governing electricity and magnetism. The goals for percentage of coverage in two general areas are as follows: Newtonian Mechanics (60 percent), Electricity and Magnetism (40 percent).</p> <p>This course is offered as a College-In-High School (CHS) course with a local college/university for optional college credit.</p> <p>This course provides the proper background for taking the Advanced Placement Examination at year's end, which is highly recommended.</p>		

Science

Course Title	Warrior Bots 10	Credit Value	1.00 Credit
Prerequisites	Concurrent enrollment in Honors Chemistry or Academic Chemistry	Open to Grade(s)	10
Description	This course is an introductory robotics course. Students will compete in the 4lb robot battle bot competition. These are small bots created many with 3D printed parts. This provides these students with a unique, hands-on experience that allows them to discover the possibilities of a career in manufacturing, and other science, technology, engineering, or math (STEM) fields. The course is offered to sophomore students as a science elective. Lessons in the program include an independent study of; A history of robotic, fundraising, safety regulations, competition rules and regulations, documentation, design, researching, measurement, material properties, shear and tensile strength, deformation, CAD, metal working, 3D printing, wiring and electronics, programming and battle techniques.		

Course Title	Warrior Bots 11	Credit Value	1.00 Credit
Prerequisites	Concurrent enrollment in Honors Physics or Academic Physics 1	Open to Grade(s)	11
Description	SWPA BotsIQ is an educational robotics competition. It provides these students with a unique, hands-on experience that allows them to discover the possibilities of a career in manufacturing, and other science, technology, engineering, or math (STEM) fields. The course is offered to junior students as a science elective. Lessons in the program include an independent study of; A history of robotic, fundraising, safety regulations, competition rules and regulations, documentation, design, researching, measurement, material properties, shear and tensile strength, deformation, CAD metal working, 3D printing, wiring and electronics, programming and battle techniques.		

Course Title	Warrior Bots 12	Credit Value	1.00 Credit
Prerequisites	Successful completion of Warrior Bots 11 with a grade of 70% or better	Open to Grade(s)	12
Description	This is an advanced and open-ended robotics class. Students could design and create any (school appropriate) robotics projects such as cars, truck, blimps, drones, planes, etc. Students will also take on a mentoring and leadership role with the design and construction of the Bots for the Warrior Bots 10 and 11 course students. It provides these students with a unique, hands-on experience that allows them to discover the possibilities of a career in manufacturing, and other science, technology, engineering, or math (STEM) fields. The course is offered to senior students as a science elective. Lessons in the program include an independent study of; A history of robotic, fundraising, safety regulations, competition rules and regulations, documentation, design, researching, measurement, material properties, shear and tensile strength, deformation, CAD metal working, 3D printing, wiring and electronics, programming and battle techniques.		

Social Studies

Faculty:

Stephen DeFelices
Robert Raffaele

Brandon Gerba
Adam Yingling

Brian Madar

Philosophy:

Studying the social sciences will enable students to make appropriate decisions about social and civic affairs. Social studies education provides students the opportunity to gain and apply historical knowledge and to perform the skills as indicated below.

- Develop critical thinking skills, responsible decision making, competency in problem solving, interpreting data, and differentiating between fact and fiction
- Prepare to participate competently and productively as concerned citizens in today's society.
- Address the ever- changing global and cultural issues of our world
- Become aware of their roles as citizens in society and prepare to participate actively, competently, and productively
- Utilize literature, community resources, and technology

COURSE TITLE	Modern Western Civilization	CREDIT VALUE:	1.00 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	9
DESCRIPTION	The scope of the course covers the period of time from approximately 1350 AD to post-World War II. Emphasis is on the study of the political, social, cultural, religious, and economic development of the European countries. The study also includes the causes and effects of significant historical events to show the relationships these have on other countries. Students will also perceive the meaning of history in its relevance to the history of the modern day world.		

COURSE TITLE	U.S. History	CREDIT VALUE	1.00 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	10
DESCRIPTION	This course will cover United States History from the post-Civil War period to the present time. The following topics will be included: urbanization, politics and reform in the Gilded Age, Imperialism and becoming a world power, the progressive era, World War I, prosperity and depression of the 1920s and 1930s, World War II, Cold War era, Korean and Vietnam era, and the contemporary world up to the present time in history. Methods of instruction will include lecture, group activities, debates, class discussions, reports, and guest speakers. After completing this course, students will have a general understanding of the process of analyzing history from political, social, geographical, and economical viewpoints.		

COURSE TITLE	World Cultures	CREDIT VALUE	1.00 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	11
DESCRIPTION	The study of World Cultures is to create within the student an understanding and appreciation of different people and their culture in order that he/she might more effectively understand today's world. A "weltanschauung" (world view) approach will be taken in this course, Units will include social institutions, the world's great religions, government and economics systems found today, artistic expression, and the major issues facing the modern world.		

Social Studies

COURSE TITLE	<i>American Government</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION	<p>American Government is a one-semester course offering advanced knowledge of the American system of government. As part of the course, students will study the Constitution, the three branches of government, and related current events. Units of instruction will include lectures, reports, and projects, in addition to other sources of information. American Government is a required course for all seniors unless they are taking an AP social studies course.</p>		

COURSE TITLE	<i>Economics</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION	<p>This course is to introduce seniors to basic economic theory. The course is divided into seven units. Units include Wants & Needs, Supply & Demand, Pricing, Business Structures, and Market Structures. Also included in the unit will be a comparison of the three economic systems found in the modern world: the Market, Traditional, and Command. Unit Two will concentrate on the market system with emphasis on how wants lead to production, the influences on prices in our economy, and the roles of the four factors of production: land, labor, capital, and entrepreneurs.</p>		

COURSE TITLE	<i>Sociology</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION	<p>Sociology is offered as a one-semester course to give the student a better understanding of the social system in which one exists. The course is designed so that he/she may understand the manner in which they impact and are impacted by society. Students will be able to observe and understand the phenomena taking place around them and analyze these in an objective way. Emphasis is placed on the development of the student's knowledge concerning topics such as socialization, conformity, family, adolescence, gender, age and health.</p>		

COURSE TITLE	<i>Psychology</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	<p>Psychology is offered as a one-semester course to help students understand themselves and predict and control their behavior. Such topics as experimental method, learning theories, personality, mental illness, and behavioral patterns are investigated. Individual and class experiments, self-testing, lecture, and role-playing are included in methods of instruction. This course is recommended for college-bound students.</p>		

Social Studies

COURSE TITLE	<i>AP U.S. History</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>(1) G.P.A. of 3.75 over all for previous years (2) Social Studies G.P.A of 4.0</i>	OPEN TO GRADE(S)	<i>10</i>
DESCRIPTION	<p>Advanced Placement U.S. History correlates the past with the present, demonstrating the usefulness of history by showing that history is to man as memory is to the individual. In arriving at conclusions, AP U.S. History shows “why” or “how” rather than “what” happens in particular circumstances. Students look at all sides of a historical problem and then eliminate the alternatives in order to decide why events occurred as they did. The text, in this case, must be a point of departure to other sources. Interactive discussion, lectures, essays, debates, and videos are included in methods of instruction. The course makes demands on the students equivalent to those of an introductory college-level course.</p> <p>This course may be substituted for American Government during the senior year only. This may also be offered as a College-in-High-School (CHS) course in affiliation with a local college/university for optional college credit.</p> <p>A summer assignment is required.</p>		

COURSE TITLE	<i>AP European History</i>	CREDIT VALUE	<i>1.00</i>
CRITERIA EVALUATED	<i>(1) G.P.A. of 3.75 over all for previous years (2) Social Studies G.P.A. of 4.0</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	<p>Advanced Placement European History covers the period of history in Europe from the Renaissance to contemporary Europe. According to the college board the study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. Without this knowledge, we would lack the context for understanding the development of contemporary institutions, the role of continuity and change in present-day society and politics, and the evolution of current forms of artistic expression and intellectual discourse. In addition to providing a basic narrative of events and movements, the goals of AP European History are to develop (a) an understanding of some of the principal themes in modern European history, (b) an ability to analyze historical evidence and historical interpretation, and (c) an ability to express historical understanding in writing.</p> <p>This course may be substituted for American Government during the senior year only. This may also be offered as a College-in-High-School course (CHS) in affiliation with a local college/university for optional college credit.</p> <p>A summer assignment is required.</p>		

Social Studies

COURSE TITLE	<i>AP World History</i>	CREDIT VALUE	<i>1.00</i>
CRITERIA EVALUATED	<i>(1) G.P.A. of 3.75 over all for previous years (2) Social Studies G.P.A. of 4.0</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	<p>Advanced Placement World History will encompass five varying themes to challenge pupils. The course will be reading and writing intensive. Unit themes include interactions between humans and the environment, state-building, the creation of economies, and the development of social structures. The interactions between various cultures will be examined in great detail. Course curriculum begins with man's early development and ends with accelerating global change. The course provides balanced global coverage, with Africa, the Americas, Asia, Oceania, Australia and Europe all represented.</p> <p>This course may be substituted for American Government during the senior year only. This may also be offered as a College-in-High-School course (CHS) in affiliation with a local college/university for optional college credit.</p> <p>A summer assignment is required.</p>		

Special/Other Courses

AP CAPSTONE:

The AP Capstone Program was developed by the College Board in conjunction with higher education professionals in response to a demand for students who are critical, analytical thinkers. The program incorporates critical reading, argumentation, and research skills through rigorous reading, writing, and research-based projects. The program is interdisciplinary in nature, offering students with interests in all academic areas the opportunity to explore them.

The AP Capstone Program includes two courses, AP Seminar and AP Research. The foundational course, AP Seminar, is taken ideally in the 10th or 11th grade year and followed immediately by the culminating course, AP Research, the following year. Students who earn only a 3 or better in both courses and having earned a 3 or better on the four additional AP exams in any other subjects will receive an AP Capstone Diploma. Students who earn only a 3 or better in AP Research and AP Seminar courses will receive an AP Seminar and Research Certificate.

COURSE TITLE	<i>AP Seminar</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Having taken or simultaneously taking at least ONE AP course in any subject</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	<p>In this course students explore topics in multiple disciplines, including science, sociology, philosophy, civics, and other areas, through the use of foundational texts that are nonfiction in nature. They will explore and solve real-world issues while engaging the topics from multiple perspectives at a collegiate level of inquiry. Students will develop analytical reading skills, research skills, speaking skills and writing skills that are appropriate for study in any subject area at the collegiate level. Students will synthesize information in order to produce both written and oral evidence-based arguments both individually and as part of a team. APA Style will be utilized so as to prepare students for work at the College and Professional levels. No fiction (ie: novels, plays etc.) will be studied in this course. As per the requirements of the College Board, an individual project, a team project, and an exam are required for the AP credit. This does not substitute for an English Credit.</p> <p>A summer reading is required.</p>		

COURSE TITLE	<i>AP Capstone Research</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Completion of AP Seminar with a 70% or better</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	<p>In this course, students will use the skill set developed in the AP Seminar course in order to produce research projects in multiple subject areas. When researching, students will develop a research question that will serve as a guide for writing collegiate-level academic papers. Students will use the QUEST framework established by the College Board in order to develop their research interests. Students will learn how to do ethical research and synthesize multiple secondary and primary sources when writing scholarly papers. APA Style will be utilized. Students will produce research-based compositions and projects that incorporate multiple sources, both primary and secondary, and will present their findings in an oral defense. As per the requirements of College Board, the course will culminate in one large research project on a topic of the student's choice with written components, an oral defense, and either visuals, performances, or exhibits as appropriate for their topics. This does not substitute for an English Credit.</p> <p>A summer reading is required.</p>		

Special/Other Courses

COURSE TITLE	<i>Drivers' Education Theory</i>	CREDIT VALUE	<i>0.25 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	<p>This nine-week course will provide students with an introduction to Drivers Theory. A minimum of 30 hours of is required for successful completion of this course. Topics include: man-made and natural laws, physical and psychological traits, legal rights and responsibilities, proper care and maintenance of a vehicle, and proper attitudes necessary for the development of a skillful, knowledgeable, courteous, and safety-conscious driver. Activities will include speakers from local and the Pennsylvania State Police to inform students on new law changes. In addition, various video presentations will be reviewed to reinforce topics discussed in class. There will also be car maintenance demonstrations and safe driving simulations. This course will be graded based on attendance, participation during class activities, completion of in-class assignments, and evaluations. Students who successfully complete this course will receive a certificate of completion stating that they completed 30 hours of Drivers Theory mandated by the State of Pennsylvania.</p>		

COURSE TITLE	<i>Study Skills</i>	CREDIT VALUE	<i>0.50 Credit or 1.00 Credit</i>
PREREQUISITE	<i>Placement According to Needs</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	<p>Study Skills is a course designed to enhance student study skills and IEP goals needed for academic success in high school. The course will use systematic approach to the strengthening of skills which includes studying techniques, note taking, time management, listening, test taking, and research.</p>		

COURSE TITLE	<i>Media Center Internship</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Interest survey to indicate background experience using digital technology. Maintaining a "C" average or 2.0 in overall GPA</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	<p>This specialized course requires students to exhibit efficient application and practice with the following technologies: 1) Using the Protocols software to create and import tracks, convert formats, use voice modulations, clip, duplicate, delete and export finalized tracks. 2) Using the Tricaster software to create video clips for personal use or to help a classroom teacher with a project. 3) Students will be able to export digital media onto the server and import into the Tricaster software. 4) Using Novation Launch pad to create original live mixes. 5) Using iMovie and Media Composter and Adobe Premier Pro to edit video. 6) Photoshop to edit photos. 7) Setting up hardware such as smart boards, projectors, cameras, speakers, etc. for assemblies and special events. 8) Creating and maintaining spreadsheets, using copy machines, using Destiny Quest to locate eBooks, books, and databases. 9) Ability to use professional video camera to film special events and assemblies.</p>		

Special/Other Courses

COURSE TITLE	<i>Print Media Productions</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>None for the 1st year students. Application for returning students</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	Print Media Production is designed to provide the students an opportunity to explore the various print news venues encompassed at Elizabeth Forward High School. The outcomes from this course include: the High School Yearbook, the High School Magazine, and website upkeep for the High School. Second year students will form the editorial staff of each publication while first-year students will experience each genre on a rotational basis. Students will learn how to write articles, the basics of photography, layout and design skills, how to use the software affiliated with each media, managerial skills, and problem solving skills. <i>Attendance at afterschool activities is required for this course.</i>		

COURSE TITLE	<i>Multimedia Productions</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Teacher Recommendation</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	Multimedia Productions is designed to provide the students an opportunity to explore the various multimedia venues offered in the media center. The outcomes for this class include the morning announcements, website media, video production, and audio production. Second-year students will serve as the producer for the announcements and video production while first-year students experience the various media outlets and produce on a rotational basis. Students will create a digital portfolio of all projects and maintain it throughout the year. Students will learn how to film and edit video, master audio tracks, create audio tracks, managerial skills, and problem solving. <i>Attendance at afterschool activities is required for this course.</i>		

COURSE TITLE	<i>SAT Test Preparation</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	This semester course provides students with nine weeks of mathematics-based test preparation and nine weeks of reading/writing-based test preparation. Students will compete a baseline exam early in the course to assess their skills. Additional exams and section practice tests will be given throughout the marking period allowing the teacher(s) and students to analyze their data and progress. Test-taking/ time strategies, grid-in/ multiple choice practice, and essay writing practice will complete the coursework for the semester.		

Special/Other Courses

COURSE TITLE	<i>Senior Work Study- Co Operative Education</i>	CREDIT VALUE	<i>1.00 Credit per class period limit 3 class periods</i>
PREREQUISITE	<i>Open to Seniors Only. All seniors must have received a score of Proficient in Keystone Math and Keystone Literature. Seniors cannot use Work Study credits to count toward graduation requirement total.</i>	OPEN TO GRADE(S)	12
DESCRIPTION	All students must register for this course through their high school guidance counselor in addition to having approval by the building principal. Also, all students must have verification from the employer for work hours - which must be scheduled during school hours (in which the student is not in attendance at the high school). Students and parents will sign a Work Study Co-Op contract, which will detail the specifics of this program.		

Technology Education

Faculty

Tom Glass

Greg Schutz

Megan Smith

Philosophy:

The true purpose of technology education is to make students as technologically literate as possible. This is done by incorporating technology, math, and the sciences. By synthesizing these three (3) subjects, students are able to understand and apply much aspects of the technology that we have today; this is crucial to the development and stability of our society. Technology Education is a comprehensive, action-based educational program concerned with technical means, their evolution, utilization and significance.

COURSE TITLE	<i>Material Processing I</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This is a half-year elective course that focuses on processing various materials and utilizing various tools and machines. A focus on wood processing but includes introduction into vinyl processing, 3D printing, laser engraving and metal fabrication. Participants will have a basic understanding of the tools and machines present in order to advance further in the Technology Education field.		

COURSE TITLE	<i>Material Processing II</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of Material Processing I with a final grade of 70% or better</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This half-year course serves to advance the participants' understanding of various material processing to complete more in-depth projects. Due to the project complexity, participants may need to purchase materials for their specific project. Greater use of the CNC, Laser Engrave, 3D Printer, wood processing machines and metal fabrication equipment will be the focus for this course.		

COURSE TITLE	<i>Transportation Systems</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This course will focus on land, air, and water transportation. Students will learn from testing models of cars, boats, planes, rockets, etc.		

COURSE TITLE	<i>Manufacturing</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of Woodworking 1 with a final grade of 80% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course offers the opportunity to further develop individual skills and manufacturing systems to produce a more advanced product. Production techniques will include manufacturing systems and individual project development. Manufacturing systems will be developed and carried out as a group or class. The purpose of this experience will be to comprehend the problems that must be considered by a typical company when manufacturing products for profit. Individual projects will be constructed to allow the student to express individual talents, skills, and interests.		

COURSE TITLE	<i>Construction and Building Processes</i>	CREDIT VALUE	<i>0.50</i>
PREREQUISITE	<i>Successful completion of Woodworking 1</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This class will emphasize building processes and procedures that are used daily in the construction industry. Students will be exposed to framing, roofing, and finish carpentry. They will build full-size projects such as sheds, gazebos, or staircases. Students will also experiment with strengths and weaknesses of beams and trusses that must be overcome when building bridges, towers, skyscrapers, etc.		

Technology Education

COURSE TITLE	<i>Maker Lab</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This course will be an exploration into the design and building process. Students will be encouraged to express their creativity and utilize problem solving to research, design and produce a product They will be given a tool and safety review at the beginning of the semester. After the review session students will submit each of their projects for approval and begin the design and production process. Students will be expected to incorporate CNC router, CNC laser engraver, vinyl, and 3D printing applications.		

COURSE TITLE	<i>Introduction to Engineering and Design (PLTW)</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This course is designed from the engineering <i>Project Lead the Way Curriculum</i> . Please see www.pltw.org for more information. Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They will work both individually and in teams to design solutions to a variety of problems using CAD, 3D modeling software, and use an engineering notebook to document their work. After successful completion of the course, student can obtain college credit for an additional fee.		

COURSE TITLE	<i>Principles of Engineering (Project Lead the Way)</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Intro to Engineering (PLTW)</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course is designed from the engineering <i>Project Lead the Way Curriculum</i> . Please see www.pltw.org for more information.. Students will explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. After successful completion of the course, student can obtain college credit for an additional fee.		

COURSE TITLE	<i>Architectural Drawing / CAD</i>	CREDIT VALUE	<i>.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	Students will investigate all areas of home design They will produce 3-D models and develop plans for a dream house. The concepts explored will be roofing, siding, finish materials, heating systems, insulation, and laundry and bathroom equipment. These concepts will be explored through model building, Auto CAD, and Architectural Desktop. Students will build physical models and also develop plans using CAD. This course is recommended for students with a “hobby” or consumer interest in house planning, students who may enter the labor construction field upon graduation, or students intending to further their education in computer-aided drafting or in the architectural design field.		

Technology Education

COURSE TITLE	CAD	CREDIT VALUE	1.00 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	9,10,11,12
DESCRIPTION	Students will advance their skills with computer-aided drafting by using Auto CAD to produce orthographic projections, isometric pictorials, oblique drawings, sections, and assembly drawing. Also, an introduction to 3-D modeling and a brief introduction to architecture will be explored. This course is recommended for pre-engineering students, design or technically-oriented students, and students who simply enjoy drawing, working with their hands, and exploring further application of the computer in graphics and engineering solutions.		

COURSE TITLE	Graphic Technologies	CREDIT VALUE	0.50 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	9,10,11,12
DESCRIPTION	This semester course will allow students to explore their creativity through graphic printing processes. Students will learn and apply basic skills in the process of screen-printing. In addition to screen-printing, students will be learning vinyl cutting skills, the art of sublimation, as well as simple heat transfer application. Digital artwork preparation and design are important components in each of the printing applications.		

COURSE TITLE	Digital Media	CREDIT VALUE	0.50 Credit
PREREQUISITE	None	OPEN TO GRADE(S)	9,10,11,12
DESCRIPTION	This instructional program focuses on the development, use, and regulation of new digital communication technologies using computer applications. Students will use computer software to explore advanced techniques of editing digital media. This program includes instruction in the principles of computers, design and development of digital communications, use of digital media, and emerging trends and issues.		

COURSE TITLE	Technology Entrepreneurship (The iSH Company)	CREDIT VALUE	1.00 Credit
PREREQUISITE	Application and Interview Required	OPEN TO GRADE(S)	10,11,12
DESCRIPTION	This is a yearlong internship course where students will apply and be interviewed to participate in the operation of a real business. Prior Technology Education or Business Education coursework is preferred but not required. The focus of the business is real world graphic applications such as screen-printing and vinyl applications. Students will create a business plan, advertise and promote, produce and sell products, interact with real clients, create and manage an ecommerce website along with other aspects of the entrepreneurship process.		

Visual Arts

Faculty

Kristy Dubinsky

Malvene Harris

Philosophy:

The Visual Arts Department of Elizabeth Forward High School offers an art experience for every student. The curriculum is designed to engage all levels of learning in a traditional art studio setting with a variety of art courses. Art students are encouraged to build a portfolio that represents various mediums and styles of his/her work while enhancing each student's creativity.

COURSE TITLE	<i>Exploring Visual Design</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This is the INTRODUCTORY art course (prerequisite for most other art classes). This course is designed to acquaint students with a variety of mediums in art. In our creative exploration students will utilize their drawing skills while incorporating other "Elements of Art" such as color, value, space, and texture within each project.		

COURSE TITLE	<i>Pop, Abstract, and Modern Art</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This course will explore artists such as Picasso, Warhol, Lichtenstein, Pollock, Calder, Matisse, Dali, Van Gogh and many more. Students will produce 2-D and 3-D works that focus on the specific artist styles and techniques of that period.		

COURSE TITLE	<i>Basic Studio Art</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Exploring Visual Design or Fundamentals of Drawing with a grade of 70% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course will allow the student to build on the learned skills from Introduction and Appreciation of Art. Students will begin to study the principles of design (balance, unity, proportion, and emphasis). Students will be introduced to many techniques in a variety of art mediums with the support of technology. Mediums covered include clay, printmaking, sculpture, painting, drawing, metal, weaving, and much more. Art skills will be enhanced with more in-depth projects in the fine arts. Written art history and criticism will be covered as they relate to the techniques being studied.		

COURSE TITLE	<i>Intermediate Studio Art</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Basic Studio Art with a grade of 80% or better</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	Students will continue working with the concepts of design while developing skills with a variety of art media. Students explore creative problem solving using visual materials. Students begin to develop independent work in areas of special interest. Written art history and criticism will be covered as they relate to the course.		

Visual Arts

COURSE TITLE	<i>Advanced Studio Art</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Intermediate Studio Art with a grade of 80% or better</i>	OPEN TO GRADE(S)	<i>12</i>
DESCRIPTION	This demanding advanced art course will allow those students with a serious interest in the visual arts the opportunity to move to an advanced level. This course will provide art students with advanced college preparation in the visual arts. The students will be enriched with art history, criticism, and aesthetics while building a portfolio. This course requires the students to create not only artwork, but also to reflect and research artwork. Students are responsible for purchasing some of their own supplies.		

COURSE TITLE	<i>Beginning Painting</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion Exploring Visual Design or Fundamentals of Drawing</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course is for the development of skills, techniques, and aesthetic sensibilities related to artistic expression using a variety of painting mediums. This course will challenge students to creatively express themselves through art by creating and composing work in new ways. Students will explore watercolors, acrylics, collage, stretching canvas, and much more.		

COURSE TITLE	<i>Advanced Painting and Mixed Media</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Beginning Painting</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course will offer in-depth exploration of painting techniques and new ways to see, use and interpret creative ideas while developing personal style. Students will create multi-directional compositions with a variety of materials, paint, collage, printing, drawing, mixing, assemblage, cutting, pasting, etc.. Emphasis will be placed on the elements of art and design with an emphasis on color, mood, texture and composition.		

COURSE TITLE	<i>Partners in Art</i>	CREDIT VALUE	<i>1.00 Credit</i>
PREREQUISITE	<i>Exploring Visual Design or Fundamentals of Drawing</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	This course is designed to improve student achievement in art through areas of communication, collaboration, leadership, and self-expression. Students will assist students with disabilities by providing them with the opportunity to work in groups and one on one. The goal is for each student to gain a sense of accomplishment through understanding and utilizing techniques presented in class with a successful end result.		

COURSE TITLE	<i>Ceramics</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>None</i>	OPEN TO GRADE(S)	<i>9,10,11,12</i>
DESCRIPTION	This course displays the medium of clay. Students will develop technical skills in hand building, modeling, molds, wheel throwing, and design. Students will explore all stages of a clay project (making clay – to glazes – to firing). Students will create functional and non-functional projects.		

Visual Arts

COURSE TITLE	<i>Advanced Ceramics</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of Ceramics with a final grade of 90% or better</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	<p>This course is for students who want to continue to explore and develop their clay skills. The student <i>must</i> have the potters' wheel <i>mastered</i>. The students will independently create artwork from start to finish, including the firing process. Emphasis will be on advanced performance in studio production, including quality ceramics and mixed media pieces. An articulation agreement exists between Elizabeth Forward School District and the Art Institute regarding course credit for successful completion of this course.</p>		

COURSE TITLE	<i>Honors Ceramics or Independent Ceramics</i>	CREDIT VALUE	<i>0.50-1.00 Credit</i>
PREREQUISITE	<i>Successful completion of Advanced Ceramics with a final grade of 90% or better. Recommendation of Art teacher must be pre-approved.</i>	OPEN TO GRADE(S)	<i>11,12</i>
DESCRIPTION	<p>This course is designed for the students who have a sincere desire to explore the medium of clay and the process of a potter independently while being guided by the instructor. The student and instructor will develop individual targets and goals to be completed by the end of the semester or year. The students will build upon the skills and techniques learned in the prerequisite classes. The student will have to participate in local art shows for the completion of this credit. As long as the class is the same class period students can commit to a semester or full year</p>		

COURSE TITLE	<i>Three Dimensional Design and Crafts</i>	CREDIT VALUE	<i>0.50 Credit</i>
PREREQUISITE	<i>Successful completion of Exploring Visual Design or Fundamentals of Drawing and Exploring Creativity with a final grade of 80% or better</i>	OPEN TO GRADE(S)	<i>10,11,12</i>
DESCRIPTION	<p>This course will focus on introducing three-dimensional projects and crafts with the support of technology. Students will explore a variety of mediums including glass, fiber arts, weaving, leather, jewelry, wire, etc. Students are responsible for purchasing some of their own supplies.</p>		

STEEL CENTER FOR CAREER AND TECHNICAL EDUCATION

Students who attend Steel Center can gain a labor market advantage through active learning that meets the expectations of 21st century employers and colleges. Each program will guide students through rigorous career oriented practical activities reinforced through core academic instruction. Students' employability will be further promoted by their opportunity to gain Industry Standard Certifications required by local employers. Students also have the opportunity to join a Career and Technical Student Organization where they will learn leadership and citizenship principles. For more information about the opportunities offered at Steel Center, please visit www.steelcentertech.com.

PA DEPARTMENT OF EDUCATION PROGRAMS OF STUDY

In accordance with the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Act), all Postsecondary Institutions receiving funds under the Act are required to award **college-level credit or equivalent clock hours** to a matriculated student and apply that credit toward the completion of the approved Pennsylvania Department of Education (PDE) Program of Study, leading to an industry-recognized credential or certificate **at the postsecondary level, or an associate or baccalaureate degree**. The purpose of this Agreement is to ensure that students make the transition from a school entity (**Steel Center**) to another school entity, college or university or a business/industry without experiencing delays in or duplication of learning. This Agreement sets forth the terms and conditions for the awarding of college-level credit or equivalent clock hours to students who complete the approved PDE Program of Study at a Secondary School so that those students can seamlessly continue their education in a related Program of Study at a Postsecondary Institution. This agreement outlines the general conditions between secondary and postsecondary institutions.

STEEL CENTER COURSE OFFERINGS

Advertising & Design (Program of Study)

Grades 10-12

CIP Code: 50.0402, 3 credits/year.

Industry Certifications Available: Adobe Certified Associate CS6 Photoshop, InDesign, Illustrator, NOCTI Skills Testing Certification

An instructional program in the applied visual arts that prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via illustrations and other forms of printed media. This program includes instruction in concept design, layout, paste-up and techniques such as engraving, etching, silkscreen, lithography, offset, drawing and cartooning, painting, collage and computer graphics.

Automotive Mechanics (Program of Study)

Grades 10-12

CIP Code: 47.0604, 3 credits/year.

Industry Certifications Available: Pennsylvania State Automotive Safety Inspection, Pennsylvania State Emissions Inspection and EPA, NOCTI Skills Testing Certification

An instructional program that prepares individuals to apply technical knowledge and skills to engage in the servicing and maintenance of all types of automobiles and light trucks. This program includes instruction in the diagnosis and testing, including computer analysis, of malfunctions in and repair of engines, fuel, electrical, cooling and brake systems and drive train and suspension systems. Instruction is also given in the adjustment and repair of individual components and systems such as cooling systems, drive trains, fuel system components and air conditioning and includes the use of technical repair information and the state inspection procedures.

Baking/Pastry Chef (Program of Study)
CIP Code: 12.0501, 3 credits/year.

Grades 10-12

Industry Certifications Available: ServSafe Manager Food Safety, ServSafe Food Handler, S/P2 Culinary Safety and Pollution Prevention, NOCTI Skills Testing Certification

Specialized classroom and practical work experiences associated with the preparation of breads, crackers, cakes, pies, pastries and other bakery products for retail distribution, for consumption in a commercial food service establishment or for special functions. Instruction includes making, freezing and handling of bake products; decorating; counter display; and packaging of merchandise. This is a comprehensive program to prepare individuals for employment in a variety of occupations in the baking industry.

Building Trades (Program of Study)
CIP Code: 46.0401, 3 credits/year.

Grades 10-12

Industry Certifications Available: NOCTI Skills Testing Certification, Pennsylvania Builder's Association Certification (PBA), OSHA-10 Hour Training CareerSafe

An instructional program that prepares individuals to apply technical knowledge and skills to keep a building functioning, and to serve a variety of structures including commercial and industrial buildings and mobile homes. Instruction includes the basics of carpentry, millwork, plumbing, painting, glazing, electricity, plastering, welding, minor sheet metal, concreting, bricklaying, tile setting, hardware usage, heating, ventilation, waterproofing, roofing and record keeping.

Carpentry (Program of Study)
CIP Code: 46.0201, 3 credits/year.

Grades 10-12

Industry Certifications Available: NOCTI Skills Testing Certification, Pennsylvania Builder's Association Certification (PBA), OSHA 10 Hour Training CareerSafe

An instructional program that prepares individuals to apply technical knowledge and skills to lay out, fabricate, erect, install and repair structures and fixtures using hand and power tools. This program includes instruction in common systems of framing, construction materials, estimating, blueprint reading and finish carpentry techniques.

Collision Repair and Refinishing (Program of Study)
CIP Code: 47.0603, 3 credits/year.

Grades 10-12

Industry Certifications Available: S/P2 Collision Safety and Pollution Prevention, NOCTI Skills Testing Certification

An instructional program that prepares individuals to apply technical knowledge and skills to repair damaged automotive vehicles such as automobiles and light trucks. Students learn to examine damaged vehicles and estimate cost of repairs; remove, repair and replace upholstery, accessories, electrical and hydraulic window and seat operating equipment and trim to gain access to vehicle body and fenders; remove and replace glass; repair dented areas; replace excessively damaged fenders, panels and grills; straighten bent frames or unibody structures using hydraulic jacks and pulling devices; and file, grind and sand repaired surfaces using power tools and hand tools. Students refinish repaired surfaces by painting with primer and finish coat.

Computer Information Systems (Program of Study)
CIP Code: 52.1201, 3 credits/year.

Grades 10-12

Industry Certifications Available: Microsoft Certified Professional, NOCTI Skills Testing Certification

An instructional program that prepares individuals to apply technical knowledge and skills to support the design and development of software applications, manage data systems and related mathematical statistics for analysis and forecasting of business data, process and retrieve business information, and prepare and interpret process and data models. Students will create a relational database, receive instruction in a variety of computer programming languages including writing, testing and debugging code; writing related system user documentation; demonstrating an understanding of core computer concepts to include the internet and the basic functions of business desktop applications; and analyzing common hardware, software and network processes. Students will receive instruction in business ethics and law, economics, office procedures and communications. Students will learn office safety, computer fundamentals, database administration and computer maintenance/troubleshooting.

Cosmetology (Tech Prep Articulation Agreement with Douglas Education Center)
CIP Code: 12.0401, 3 credits/year.

Grades 10-12

Industry Certifications Available: Cosmetology License, Manicurist, Esthetician, NOCTI Skills Testing Certification

An instructional program that prepares individuals to apply technical knowledge and skills related to experiences in a variety of beauty treatments including the care and beautification of the hair, complexion and hands. Instruction includes training in giving shampoos, rinses and scalp treatments; hair styling, setting, cutting, dyeing, tinting and bleaching; permanent waving; facials; manicuring; and hand and arm massaging. Bacteriology, anatomy, hygiene, sanitation, salon management including record keeping and customer relations are also emphasized. Instruction is designed to qualify pupils for the licensing examination.

Culinary Arts (Program of Study)
CIP Code: 12.0508, 3 credits/year.

Grades 10-12

Industry Certifications Available: ServSafe Manager Food Safety, ServSafe Food Handler, S/P2 Culinary Safety and Pollution Prevention, NOCTI Skills Testing Certification

An instructional program that prepares students for employment related to institutional, commercial or self-owned food establishments or other food industry occupations. Instruction and specialized learning experiences include theory, laboratory and work experience related to planning, selecting, preparing and serving of quantity food and food products; nutritive values; use and care of commercial equipment; safety; and sanitation precautions. Instruction skills are provided to individuals desiring to become employed in all areas of the food service industry at entry level.

Electrical Construction (Program of Study)
CIP Code: 46.0399, 3 credit/year.

Grades 10-12

Industry Certifications Available: NOCTI Skills Testing Certification, Pennsylvania Builder's Association Certification (PBA)

An instructional program that prepares individuals to apply technical knowledge and skills necessary to install, operate, maintain and repair electrically-energized residential, commercial and industrial systems, and DC and AC motors, controls and electrical distribution panels. Instruction emphasizes practical application of mathematics, science, circuit diagrams and use of electrical codes and includes blueprint reading, sketching and other subjects essential for employment in the electrical occupations. Reading and interpretation of commercial and residential construction wiring codes and specifications, installation and maintenance of wiring, service and distribution networks within large construction complexes are also critical components of the program.

Health Assistants (Program of Study)
CIP Code: 51.0899, 3 credits/year.

Grades 10-12

Industry Certifications Available: Pennsylvania Nurse Aide Registry, Basic Life Support Health Care Providers, NOCTI Skills Testing Certification

A cluster program with a combination of subject matter and experiences designed to prepare individuals for entry-level employment in a minimum of three related health occupations under the supervision of a licensed health care professional. Instruction consists of core course content with clinical experiences in one or two health related occupations. The core curriculum consists of planned courses for introduction of health careers, basic anatomy and physiology, medical terminology, legal and ethical aspects of health care and communications and at least three planned courses for the knowledge and skills for the occupational area such as medical assisting, ward clerk, nursing assisting, etc.

Heating, Air Conditioning & Refrigeration (Program of Study)
CIP Code: 47.0201, 3 credits/year.

Grades 10-12

Industry Certifications Available: EPA 608 Technician Certification, NOCTI Skills Testing Certification, Pennsylvania Builder's Association Certification (PBA)

An instructional program that prepares individuals to apply technical knowledge and skills to install, repair and maintain commercial and domestic heating, air conditioning and refrigeration systems. Instruction includes theory and application of basic principles involved in conditioning of air (cooling and heating); filtering and controlling humidity; operating characteristics of various units and parts; blueprint reading; use of technical reference manuals; the diagnosis of malfunctions; overhaul, repair and adjustment of units and parts such as pumps, compressors, valves, springs and connections; and repair of electric/electronic and pneumatic control systems.

Medium/Heavy Truck (Program of Study)
CIP Code: 47.0613, 3 credits/year.

Grades 10-12

Industry Certifications Available: Pennsylvania State Automotive Safety Inspection, Pennsylvania State Emissions Inspection and EPA, SP/2 Heavy Duty Safety and Pollution Prevention, NOCTI Skills Testing Certification

A program that prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. Includes instruction in diesel engine mechanics, suspension and steering, brake systems, electrical and electronic systems, preventive maintenance inspections, drive trains, HVAC systems, and auxiliary equipment installation and repair.

Protective Service (Program of Study)
CIP Code: 43.9999, 3 credits/year.

Grades 10-12

Industry Certifications Available: National Incident Management System, Basic Life Support Health Care Providers, Hazardous Materials Response Awareness, PATH- Practical and Tactical Handcuffing, NOCTI Skills Testing Certification

An instructional program that prepares individuals to apply technical knowledge and skills required for performing entry-level duties in law enforcement, firefighting, EMT and other safety services. This program stresses the techniques, methods and procedures peculiar to the areas of criminal justice and fire protection especially in emergency and disaster situations. Physical development and self- confidence skills are emphasized due to the nature of the specific occupation(s). In addition to the application of mathematics, communication, science and physics, students receive training in social and psychological skills, map reading, vehicle and equipment operations, the judicial system, pre-hospital emergency medical care and appropriate emergency assessment, treatment and communication.

Welding

Grades 10-12

(Program of Study)

CIP Code: 48.0508, 3 credits/year.

Industry Certifications Available: NOCTI Skills Testing Certification, SP/2 Welding Safety Pollution and Prevention

An instructional program that prepares individuals to apply technical knowledge and skills in gas, arc, shielded and non-shielded metal arc, brazing, flame cutting and plastic welding. Hand, semi-automatic and automatic welding processes are also included in the instruction. Students learn safety practices and types and uses of electrodes and welding rods; properties of metals; blueprint reading; electrical principles; welding symbols and mechanical drawing; use of equipment for testing welds by ultrasonic methods and destruction and hardness testing; use of manuals and specification charts; use of portable grinders and chemical baths for surface cleaning; positioning and clamping; and welding standards established by the American Welding Society, American Society of Mechanical Engineers and American Bureau of Ships.

High School Administration

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Mrs. Heather Hibner, Assistant Principal
Mr. Anthony Popowitz, Assistant Principal

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Mr. Joseph McManus (412) 896-2347 – Counselor Grades 10-12 (Li-Z)
Ms. Crista Scalfari (412) 896-2334 Counselor Grades 8-9
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Mrs. Lauren Fusco (412) 896-2352 – Guidance Secretary

District Office Administration

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Dr. Todd Keruskin, Assistant Superintendent
Dr. Randal Sydeski, Director of Pupil Assessments/Personnel Services
Mr. Richard Fantauzzi, Director of Finance and Operations
Mrs. Mary Beth Wiseman, Director of Technology
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