# Forest City Regional School District

**Every Child, Every Need, Every Day**

# High School Program of Studies

## 2024-2025

Revised January 2024

Forest City Regional High School
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Forest City, PA 18421
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# 2024-2025 Forest City Regional High School Program of Studies

The Forest City Regional School District vision, mission, and guiding beliefs are shared by the Board of Education, Faculty, Staff and Administration. Our educational programming is reflective of our guiding beliefs and supportive of our vision and mission.

**Vision**

All Forest City Regional School District students will graduate prepared for post-secondary learning, career, and service.

**Mission**

The Forest City Regional School District will challenge, empower, and inspire all students to GO BE GREAT! By:

- Setting high academic standards
- Fostering critical thinking skills
- Creating opportunities for collaboration, communication, and innovation
- Promoting self-directed learning and personal goal setting
- Engaging in opportunities to care for others

**Guiding Beliefs**
**Every Child, Every Need, Every Day**

1. Every child can learn.
2. Every child is entitled to an education that is designed to support their individual academic, social-emotional and behavioral needs.
3. Learning happens in a safe, supportive and collaborative environment.
4. We are a community of lifelong learners comprised of students, parents, teachers, paraprofessionals, administrators and community members.
5. High expectations for ALL are an integral part of the learning process.
6. The effort of our teachers and students makes all the difference and is the most valuable asset in our school district.
7. Collaboration among students, families, teachers, administrators and community members is essential for continuous improvement.
   Our shared leadership approach will maximize the professional growth of our educational team by empowering individuals and giving them an opportunity to lead in their areas of expertise.

**Forest City Regional High School Teachers Believe:**

- Every student can learn.
- Positive relationships are built on mutual respect and are the foundation for all learning.
- Learning happens in a safe, supportive, collaborative environment.
- Student learning is an active process that progresses and changes daily.
- Students learn by engaging with content, generating inquiry, and communicating with teachers and peers.
- Growth is the true measurement of student learning.
- Students will apply the skills we teach them to life experiences.

# Table of Contents

# Course Scheduling Information

**Timeline**

In the winter, school counselors and administration will hold grade level assemblies explaining the course selection process, timeline, course offerings, the recommendation process and course prerequisites. Following the assemblies, the school counselors will meet with smaller groups of students within each grade level to distribute course selection forms and review course information.

**Course Selection**

Students should carefully select courses based upon their future plans and discussions with their parents, teachers, and school counselor. Selections must be submitted to the School Counseling Office by the due date. Course selection and scheduling will occur in the fourth quarter of the school year.
**Students who do not submit course selections in a timely fashion will have courses selected for them.**

**Elective Courses**

A variety of elective courses are available for students to expand and explore interests while developing fundamental critical thinking skills. Students should review all elective course descriptions and speak with their school counselor and teachers about which electives could enhance their school experience. Seniors will receive preference in scheduling elective classes.

**Recommendation Process**

During the third quarter, teachers will complete recommendation forms based on the following: students' academic performance in the classroom, students' work ethic (homework/assignment completion, class participation, ability to work collaboratively, and self-advocacy skills).

Recommendation forms are reviewed for eligibility by school counselors. The review process will include additional data such as previous and current state/local assessment performance.

If a student disagrees with the recommendation, the recommending teacher will meet with the student to review academic performance expectations for the fourth quarter. The recommending teacher may choose to maintain or change the recommendation based on student performance at the end of the fourth quarter.

**Override Process**

At the end of the fourth quarter, if a student or parent is still in disagreement with the teacher's recommendation, a student must pick up and complete an override form in the School Counseling Office. The completed override form should be submitted to the School Counseling Office for review by administration. The school counselor will schedule a meeting with the parent(s), student and Administration for final determination on placement.

**Student Schedule Changes**

Students can request a schedule change on the designated summer day in August and/or until the end of the first 6-day cycle of the school year. Students will **not** be granted a schedule change after the end of the first 6-day cycle unless it was due to administrative error. The August dates will be shared prior to the close of the current school year.

**Principal-Initiated Schedule Changes**

The Principal may elect to change a schedule in extreme circumstances. The decision to change a schedule **after the deadline** will remain **solely with the Principal**.

***Parental involvement and consent plays an important part in determining proper course placement.***

# Advanced Course Overview

## Dual Enrollment

Pennsylvania's Dual Enrollment Program allows the school district to partner with Keystone College and Lackawanna College to offer high school Juniors and Seniors, who have demonstrated academic ability and readiness, the chance to earn college credit while completing their course requirements at FCRHS. These courses may earn both high school and college credit. This curriculum is college-level and permission depends upon availability and academic readiness. To be eligible for college credit, students are required to pay tuition fees at the associated institution.

Applicants for the Dual Enrollment Program must be in the top 50% of their class and have demonstrated the ability to do college level work as evidenced by performance on the Keystone Exams in Algebra I, Literature and/or Biology. Grades earned in dual enrollment classes at FCRHS will be included in GPA and class rank calculations.

Forest City Regional High School offers the following Dual Enrollment Courses: Anatomy and Physiology; AP Chemistry; AP English Language and Composition; Advanced Public Speaking; AP Government and Politics; AP Calculus; College Level Physics; Psychology; Spanish III; AP Spanish; College Algebra; Honors Chemistry with Lab; Accounting I; Accounting II; Calculus Honors, Trig/Pre-Calc Honors, American History II, AP Computer Science, Advanced Office. Courses offered for Dual Enrollment credit are at the discretion of the participating higher education institutions.

## Advanced Placement

The Advanced Placement (AP) Program offers college level courses and examinations to high school students. Advanced Placement courses make it possible for academically talented students to increase the challenge of their studies, both in high school and in college. The Advanced Placement Program consists of courses identified by the College Board as college level in content. Upon successful completion of an AP course, it is strongly suggested that students take the corresponding AP exam to realize the full benefit of the course. Based on the score the student receives on a particular examination and the specific college or university that a student chooses to attend, college credit or course waiver may be offered. **Students enrolled in these courses will be expected to perform at an advanced level of competence and will be required to complete summer work and a significant amount of additional work outside of the classroom.**

Forest City Regional High School offers the following Advanced Placement (AP) Courses:
AP Calculus, AP Statistics, AP English Language and Composition, AP English 10: AP Seminar, AP Research, AP Government and Politics, AP Biology, AP Chemistry, AP Spanish, AP Computer Science Principles and AP Computer Science.

# Weighted Grades and Honor Roll

## Weighted Grades

In order to reward and encourage students to take enriched classes, a 3% multiplier will be used for specifically identified courses and a 5% multiplier will be used for Advanced Placement (AP) to calculate a weighted GPA. This weighting system began with the class of 2021.

## Weighted Courses

All Advanced Placement Course (AP) will be calculated with a 5% multiplier
The following courses will be calculated with a 3% multiplier:

Honors Chemistry with Lab
College Level Physics with Lab

## Honor Roll Requirements

**Distinguished Honor Roll**
Requires an average minimum grade of 93% and a minimum grade of 70% or "S" in all subjects.

**Honor Roll**
Requires an average minimum grade of 88% and a minimum grade of 70% or "S" in all subjects.

# Sequence of Study

| Grade 9 | Grade 10 | Grade 11 | Grade 12 |
|---|---|---|---|
| English 9<br>1 credit | Composition 10<br>.5 credit English Course<br>AP English 10: AP Seminar | Two English Courses<br>.5 credits each | Two English Courses<br>.5 credits each |
| Algebra I 1.5 credits<br>OR<br>Algebra IA 1 credit<br>OR<br>Geometry Honors 1 credit | Algebra I B 1 credit<br>OR<br>Geometry Honors 1 credit | Math Requirement<br>1 credit | Math Requirement<br>1 credit |
| General Science 9<br>1 credit<br>OR<br>Biology Honors with Lab<br>1.5 credits | Biology Honors with Lab 1.5 credits<br>OR<br>AP Biology with Lab<br>1.5 credits<br>OR<br>Honors Chemistry with Lab<br>OR<br>General Chemistry | Science Elective<br>1 credit minimum | Science Option |
| American History I Honors<br>1 credit | American History II Honors 1 credit | Social Studies Elective 1 credit | Social Studies Option |
| | | Public Speaking .5 | Financial Literacy .5 |
| PE/Health .5 credits | Health .5 credits | | Physical Education<br>.5 Credits |
| Foreign Language Option 1 credit | Foreign Language Option 1 credit | Foreign Language Option 1 credit | Foreign Language Option 1 credit |
| Elective Option .5 credits | Elective Options 1 credit | Elective Options 2 credits | Elective Options 4.5 credits |

| CTC | | |
|---|---|---|
| **Grade 10** | **Grade 11** | **Grade 12** |
| Composition 10 .5 credit<br>English Course .5 credits each | One English Courses .5 credits<br>Public Speaking .5 credits | Two English Courses .5 credits each |
| Algebra I B 1 credit<br>OR<br>Geometry 1 credit<br>OR<br>Intro to Drafting | Math Requirement 1 credit | |
| Biology 1.5 credits | American History II 1 credit | Science Elective<br>1 credit minimum |
| | | Social Studies Elective 1 credit |
| Health/PE .5 credits | | |
| CTC Elective 2 credits | CTC Elective 2 credits | CTC Elective 2 credits |

** Half Credit courses (0.50) counting towards **Related Arts Elective requirements** include Public Speaking, and Financial Literacy.

Students in grades 9-12 will be scheduled for 7 credits each year

# Graduation Requirements

## Minimum Credit Requirements for Graduation

**Forest City Regional High School**

| | |
|---|---|
| English | 4.0 Credits |
| Science | 3.5 Credits |
| Mathematics | 4.0 Credits |
| Social Studies | 3.0 Credits |
| Health & Wellness | 1.0 Credit |
| *Related Arts | 2.0 Credits |
| Electives | 6.0 Credits |
| Total | 24 Credits |

**Forest City Regional High School/Career Technology Center**

| | |
|---|---|
| English | 4.0 Credits |
| Science | 3.5 Credits |
| Mathematics | 3.0 Credits |
| Social Studies | 3.0 Credits |
| Health & Wellness | 1.0 Credit |
| Electives** | 2.5 Credits |
| CTC Electives | 6.0 Credits |
| Total | 23 Credits |

*Courses satisfying the Related Arts electives include: Art, Music, and World Language
** Any elective course would apply

All credits counting towards graduation requirements must be earned in Grades 9 through 12.

**Mandatory Course Requirements**

To ensure that Forest City Regional High School graduates have the necessary skills and competencies for post-secondary success, the following courses are mandatory for all students:

| | |
|---|---|
| 9th Grade | Health/Physical Education |
| 10th Grade | Health 10 |
| 11th Grade | Public Speaking |
| 12th Grade | Financial Literacy |

Through these courses students will work to develop skills for post-secondary success. Students will develop skills to work on a team through Physical Education lessons. Career development skills will be a focus of public speaking, and financial literacy will focus on developing financial competencies to use after high school

# Graduation Project Requirements

## Career Portfolio

As a culmination of the High School career and post-secondary coursework, each student must complete a career portfolio under the guidance and direction of high school faculty members. Students will participate annually in career exploration courses specifically focused on topics relevant to their age appropriate life experiences. Throughout these courses, they will begin to build pieces of evidence which will be added to their career portfolio. This portfolio will be reviewed in their 11th grade year for satisfactory completion. This career portfolio is mandated for high school graduation per the Pennsylvania Department of Education.

The Career Portfolio will include the following artifacts or evidence of participation in College and Career Readiness activities: Career Interest Inventory Sheet, Resume, Cover Letter, Reference Letter, Budget Analysis, Networking Brochure, Job Application, Mock Interview (participation), Career Professional Interview, Job Shadowing: Contact, Experience, Mentor Interview, Written Reflection, Career Plan, and documentation of the required 20 hours of community service. In addition, students are responsible for completing the Graduation Project Checklist, the Graduation Project Contract (related to the 20 hours of community service) and the Job Shadowing Contact Confirmation Form.

Students will update all artifacts in Smart Futures. The following Artifacts are integrated into the Smart Futures platform:

High School

1. Job Interviews (11th Grade, Public speaking)
2. My Personality Type (9th Grade, Freshman Seminar)
3. Personal Interests (9th Grade, Freshman Seminar)
4. Active Listening (11th Grade, Public Speaking)
5. Career Clusters and Pathways (9th Grade, Freshmen Seminar OR ELA)
6. Job Applications (11th Grade, Public Speaking)
7. Personal Budget (12th Grade, Financial Literacy)

Each artifact and activity is aligned with a grade level career education course. Students will be responsible for uploading their approved documents into their career portfolio in Smart Futures.

# Career Pathways

The Career Pathways are designed to map out the most beneficial sequence of courses leading to specific careers. Students and parents are encouraged to review the pathway that matches the interests and post-secondary goals for students.

The pathways identify careers students can enter upon graduation from: high school, technical school, or a four-year college program. Please note that the 4 Year College + column includes careers that require advanced study beyond a bachelor's degree.

Forest City Regional High School has designed five pathways to help students make informed and purposeful scheduling decisions: Agri-Science, Science, and Health; Arts and Communication; Business, Finance Marketing, and Information Technology; Engineering, Manufacturing, and Industrial Technology; and Human Services.

**Pathway: Agri-Science, Science, Health**

Description: The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources. Also, planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. In addition, planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering), including laboratory and testing services, and research and development services.

## Careers:

| High School | Technical School | 4-Year College + |
|---|---|---|
| Hospital Worker | Dental Hygienist | Physician Assistant |
| Home Health Aide | Medical Lab Technician | Environmental Scientist |
| Nurse's Aide | Radiological Technician | Veterinarian |
| Pharmacy Technician | Veterinary Technician | Chemist |
| Wildlife Reserve Worker | Nanotechnician | Athletic Trainer |
| Animal Caretaker | Fish and Game Worker | Pharmacist |
| Food Conservation | Forest Conservation | Marine Biologist |
| Extension Service Worker | Licensed Practical Nurse | Physical Therapist |
| Optician | Respiratory Therapist | Physician |
| Farmer | | Nursing |

## Course Recommendations:

| | 9th Grade | 10th Grade | 11th Grade | 12th Grade |
|---|---|---|---|---|
| History | Honors American History I | Honors American History II | American Government OR<br>AP Government & Politics OR<br>Psychology | Psychology<br>Ancient World History<br>Modern US History &<br>Contemporary Issues<br>AP Government & Politics<br>OPTIONAL |
| Language Arts | English I | 1 ELA Credit | 1 ELA Credit<br>AND<br>Public Speaking | 1 ELA Credit |
| Mathematics | Honors Geometry OR | Honors Algebra II | Honors Pre-Calc Trig | AP Calculus OR<br>Statistics OR<br>Calculus OR AP Statistics |
| | Algebra I | Honors Geometry | Honors Algebra II | Honors Pre-Calc Trig OR<br>College Algebra OR<br>Statistics/AP Statistics |
| | Algebra IA | Algebra IB | Intro to Drafting OR Honors Geometry | Honors Algebra II OR<br>Algebra II Topics OR<br>Civil Engineering OR<br>Applied Mathematics |
| Science | General Science 9<br>OR<br>Honors Biology | Honors Biology<br>OR<br>AP Biology | Honors Chemistry<br>Anatomy & Physiology<br>AP Biology | Honors Physics<br>AP Chemistry<br>Anatomy & Physiology |
| | | | General Chemistry<br>PA Ecology | General Physics<br>PA Ecology |
| Mandatory Related Arts | PE / Health | PE / Health | PE / Health | PE / Health<br>Financial Literacy |
| Language | Spanish I<br>French I | Spanish II<br>French II | | |
| Electives | Band<br>Chorus<br>Introduction to Engineering Design<br>Art Foundations<br>Intro to Business<br>Intro to Engineering Technology | Band<br>Chorus<br>Principles of Engineering<br>Art Foundations<br>Graphic Design<br>Intro to Business | Band<br>Chorus<br>Art Foundations<br>Intro to Business | Band<br>Chorus<br>Intro to Business |

## Career Technology Options: Health Occupations

| | 10th | 11th | 12th |
|---|---|---|---|
| History | Honors American History II | American Government OR<br>AP Government & Politics OR<br>Psychology OR<br>Ancient World History OR<br>Modern US History & Contemporary Issues | |
| Language Arts | 1 ELA Credit | 0.5 ELA Credit<br>AND<br>Public Speaking | 1 ELA Credit |
| Mathematics | Algebra IB | Honors Geometry OR<br>Intro to Drafting OR<br>Applied Mathematics | |
| | Honors Geometry | Algebra II Topics OR<br>Honors Algebra II OR<br>Civil Engineering OR<br>Applied Mathematics | |
| Science | Honors Biology | General Chemistry OR<br>General Physics OR<br>PA Ecology | |
| Elective | Health | | |

**Pathway: Arts and Communications**

Description: Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

Careers:

| High School | Technical School | 4-Year College + |
|---|---|---|
| Sound Technician | Choreographer | Art or Music Teacher |
| Radio Operator | Desktop Publisher | Music Director |
| Dancer | Recording Engineer | Art Director |
| Newsroom Worker | Computer Graphic Artist | Telecommunications |
| Photographer | Artist | Interior Designer |
| Floral Designer | Musician | Multi-Media Artist |
| Circulation | Broadcast Technician | Writer/Editor |

Course Recommendations:

<table>
<tr><th></th><th>9th Grade</th><th>10th Grade</th><th>11th Grade</th><th>12th Grade</th></tr>
<tr><td>History</td><td>Honors American History I</td><td>Honors American History II</td><td colspan="2">Modern US History & Contemporary Issues<br>Ancient World History Choose 1<br>American Government<br>Psychology<br>AP Government & Politics</td></tr>
<tr><td>Language Arts</td><td>English I</td><td>1 ELA Credit</td><td>1 ELA Credit<br>AND<br>Public Speaking</td><td>1 ELA Credit<br>Advanced Public Speaking</td></tr>
<tr><td rowspan="3">Mathematics</td><td>Honors Geometry OR</td><td>Honors Algebra II</td><td>Honors Pre-Calc Trig</td><td>AP Calculus OR<br>AP Statistics OR<br>Statistics OR<br>Calculus</td></tr>
<tr><td>Algebra I</td><td>Honors Geometry</td><td>Honors Algebra II</td><td>Honors Pre-Calc Trig OR<br>College Algebra OR Statistics</td></tr>
<tr><td>Algebra IA</td><td>Algebra IB</td><td>Intro to Drafting OR Honors Geometry</td><td>Honors Algebra II OR<br>Algebra II Topics OR<br>Civil Engineering OR<br>Applied Mathematics</td></tr>
<tr><td>Science</td><td rowspan="2">General Science 9<br>OR<br>Honors Biology</td><td rowspan="2">Honors Biology<br>OR<br>AP Biology<br>OR<br>Honors Chemistry with Lab</td><td colspan="2">PA Ecology<br>General Chemistry Choose 1<br>General Physics</td></tr>
<tr><td>Mandatory Related Arts</td><td>PE / Health</td><td>PE / Health<br>Financial Literacy</td></tr>
<tr><td>Language</td><td>Spanish I<br>French I</td><td>Spanish II<br>French II</td><td>Spanish III</td><td>Spanish IV</td></tr>
<tr><td>Art Electives</td><td>Art Foundations</td><td>Studio Art II, Graphic Design OR<br>3-D Art</td><td>Studio Art III,<br>Graphic Design OR<br>3-D Art</td><td>Advanced Studio Art<br>AND / OR Graphic Design</td></tr>
<tr><td>Electives</td><td colspan="4">Band, Chorus, Intro to Business</td></tr>
</table>

## Career Technology Options: Commercial and Advertising Design, Digital Communications, Graphic Communications

| | 10th | 11th | 12th |
|---|---|---|---|
| History | Honors American History II | American Government<br>AP Government & Politics<br>Psychology<br>Ancient World History<br>Modern US History & Contemporary Issues | |
| Language Arts | 1 ELA Credit | 0.5 ELA Credit<br>AND<br>Public Speaking | 1 ELA Credit |
| Mathematics | Algebra IB | Honors Geometry OR<br>Intro to Drafting OR<br>Applied Mathematics | |
| | Honors Geometry | Algebra II Topics OR<br>Honors Algebra II OR<br>Civil Engineering OR<br>Applied Mathematics | |
| Science | Honors Biology | General Chemistry OR<br>General Physics OR<br>PA Ecology | |
| Elective | | | |

**Pathway: Business, Finance, Marketing, and Information Technology**

Description: Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy. In addition, planning, services for financial and investment planning, banking, insurance, and business financial management could be involved.

Careers:

| High School | Technical School | 4-Year College + |
|---|---|---|
| Bookkeeper<br>Computer Operator<br>File or Payroll Clerk<br>Administrative Assistant<br>Telemarketer<br>Advertising Sales Agent | Claims Adjuster<br>Software Engineer<br>Sales Representative<br>Computer Support Specialist<br>Real Estate Agent<br>Desktop Publisher | Certified Accountant<br>Financial Manager<br>Securities Sales Rep.<br>Systems Software Engineer<br>Systems Analyst<br>Management Analyst<br>FBI Agent |

Course Recommendations:

<table>
<tr><th></th><th>9th Grade</th><th>10th Grade</th><th>11th Grade</th><th>12th Grade</th></tr>
<tr><td>History</td><td>Honors American History I</td><td>Honors American History II</td><td colspan="2">Modern US History & Contemporary Issues<br>Ancient World History Choose 1<br>American Government<br>AP Government & Politics<br>Psychology</td></tr>
<tr><td>Language Arts</td><td>English I</td><td>1 ELA Credit</td><td>1 ELA Credit<br>AND<br>Public Speaking</td><td>1 ELA Credit<br>Advanced Public Speaking</td></tr>
<tr><td rowspan="3">Mathematics</td><td>Honors Geometry OR</td><td>Honors Algebra II</td><td>Honors Pre-Calc Trig</td><td>AP Calculus OR<br>Statistics OR<br>Calculus</td></tr>
<tr><td>Algebra I</td><td>Honors Geometry</td><td>Honors Algebra II</td><td>Honors Pre-Calc Trig OR<br>College Algebra OR<br>AP Statistics OR<br>Statistics</td></tr>
<tr><td>Algebra IA</td><td>Algebra IB</td><td>Intro to Drafting OR Honors Geometry</td><td>Honors Algebra II OR<br>Algebra II Topics OR<br>Civil Engineering OR<br>Applied Mathematics</td></tr>
<tr><td>Science</td><td rowspan="2">General Science 9<br>OR<br>Honors Biology</td><td rowspan="2">Honors Biology<br>OR<br>AP Biology</td><td colspan="2">PA Ecology<br>General Chemistry Choose 1<br>General Physics</td></tr>
<tr><td>Mandatory Related Arts</td><td>PE / Health</td><td>PE / Health<br>Financial Literacy</td></tr>
<tr><td>Language</td><td>Spanish I<br>French I</td><td>Spanish II<br>French II</td><td>Spanish III</td><td>Spanish IV</td></tr>
<tr><td>Business Electives</td><td colspan="4">Intro to Business, Advanced Office, Accounting, Business Law, Marketing, Entrepreneurship, Web Page Design, Computer Science, Financial Planning</td></tr>
<tr><td>Electives</td><td>Band<br>Chorus<br>Art Foundations<br>Computer Science Essentials</td><td>Band<br>Chorus<br>Art Foundations<br>Graphic Design</td><td>Band<br>Chorus<br>Art Foundations<br>Graphic Design</td><td>Band<br>Chorus<br>Graphic Design</td></tr>
</table>

## Career Technology Options: Computer Systems Networking, Computer Systems Technology

| | 10th | 11th | 12th |
|---|---|---|---|
| History | Honors American History II | American Government<br>AP Government & Politics<br>Psychology<br>Ancient World History<br>Modern US History & Contemporary Issues | |
| Language Arts | 1 ELA Credit | 0.5 ELA Credit<br>AND<br>Public Speaking | 1 ELA Credit |
| Mathematics | Algebra IB | Honors Geometry OR<br>Intro to Drafting OR<br>Applied Mathematics | |
| | Honors Geometry | Algebra II Topics OR<br>Honors Algebra II OR<br>Civil Engineering OR<br>Applied Mathematics | |
| Science | Honors Biology | General Chemistry OR<br>General Physics OR<br>PA Ecology | |
| Elective | | | |

**Pathway: Engineering, Manufacturing, and Industrial Technology**

Description: The practical application of math, science, and technology to solve real world problems

Careers:

| High School | Technical School | 4-Year College + |
|---|---|---|
| HVAC<br>Roofer<br>Machine Mechanic<br>Surveyor<br>Machine/Equipment Operator<br>Machinist<br>Plumber<br>Carpenter | Truck Driver<br>CAD/CAM Technician<br>Electrical Technician<br>Diesel Mechanic<br>Production Worker<br>Welder<br>Auto Mechanic/Repair<br>Grader/Dozer Operator | Nuclear Engineer<br>Architect<br>Industrial Engineer<br>Mechanical Engineer<br>Software Engineer*<br>Construction Manager<br>Civil Engineer<br>Cost Estimator<br>Scientist |

Course Recommendations:

| | 9th Grade | 10th Grade | 11th Grade | 12th Grade |
|---|---|---|---|---|
| History | Honors American History I | Honors American History II | Modern US History &<br>Contemporary Issues | American Government<br>AP Government & Politics<br>Psychology<br>Ancient World History<br>OPTIONAL |
| Language Arts | English I | 1 ELA Credit | 1 ELA Credit<br>AND<br>Public Speaking | 1 ELA Credit |
| Mathematics | Honors Geometry OR | Honors Algebra II | Honors Pre-Calc Trig | AP Calculus OR<br>AP Statistics OR<br>Statistics OR<br>Calculus |
| | Algebra I | Honors Geometry | Honors Algebra II | Honors Pre-Calc Trig OR<br>College Algebra OR<br>AP Statistics OR<br>Statistics |
| | Algebra IA | Algebra IB | Intro to Drafting OR Honors Geometry | Honors Algebra II OR<br>Algebra II Topics OR<br>Civil Engineering OR<br>Applied Mathematics |
| Science | General Science 9<br>OR<br>Honors Biology | Honors Biology<br>OR<br>AP Biology | Honors Chemistry | College Level Physics AND<br>AP Chemistry |
| | | | General Chemistry | General Physics |
| Mandatory Related Arts | PE / Health<br>Freshman Seminar | PE / Health | PE / Health | PE / Health<br>Financial Literacy |
| Language | Spanish I<br>French I | Spanish II<br>French II | | |
| PLTW Electives | Introduction to Engineering Design<br>Computer Science Essentials*<br>Introduction to Engineering Design<br>Intro to Engineering Technology | Principles of Engineering<br>Computer Science Essentials<br>Computer Integrated Manufacturing* | Engineering Specialization Course:<br>a) Computer Integrated Manufacturing,<br>b) Civil Engineering & Architecture, OR<br>c) Digital Electronics<br>d) AP Computer Science Principles*<br>Drafting | Engineering Design and Development<br>OR<br>Engineering Specialization Course<br>Civil Engineering<br>Computer Integrated Manufacturing<br>AP Computer Science A* |
| Electives | Band<br>Chorus<br>Intro to Business<br>Art Foundations<br>Entrepreneurship<br>Foods<br>Foods & Nutrition | Band<br>Chorus<br>Art Foundations<br>Graphic Design<br>Intro to Business<br>Entrepreneurship<br>Advanced Foods | Band<br>Chorus<br>Art Foundations<br>Graphic Design<br>Intro to Business<br>Business Law<br>Advanced Office | Band<br>Chorus<br>Graphic Design<br>Intro to Business<br>Business Law |

**Career Technology Options: Plumbing and Heating, Welding, Automotive, Building Mechanics, Carpentry, Collision Repair, Electrical Construction and Maintenance, Masonry**

| | 10th | 11th | 12th |
|---|---|---|---|
| History | Honors American History II | American Government<br>AP Government & Politics<br>Psychology<br>Ancient World History<br>Modern US History & Contemporary Issues | |
| Language Arts | 1 ELA Credit | 0.5 ELA Credit<br>AND<br>Public Speaking | 1 ELA Credit |
| Mathematics | Algebra IB | Honors Geometry OR<br>Intro to Drafting OR<br>Applied Mathematics | |
| | Honors Geometry | Algebra II Topics OR<br>Honors Algebra II OR<br>Civil Engineering OR<br>Applied Mathematics | |
| Science | Honors Biology | General Chemistry OR<br>General Physics OR<br>PA Ecology | |
| Elective | | | |

**Pathway: Human Services**

Description: Preparing individuals for employment in career pathways that relate to families and human needs. In addition, planning, managing, and providing education and training services, and related learning support services.

Careers:

| High School | Technical School | 4-Year College + |
|---|---|---|
| Utility Worker<br>Teacher's Assistant<br>Home Care Aide<br>Child Care Worker<br>Armed Services Career<br>Travel Agent<br>Cosmetics Representative | Teacher's Aide<br>Cosmetologist<br>Massage Therapist<br>Fire Fighter<br>Postmaster<br>Chef<br>Crime Lab Technician<br>Fashion Designer | Teacher/Principal<br>Lawyer<br>Mental Health Counselor<br>Workforce Director<br>Hotel/Motel Management<br>Criminologist<br>Marriage/Family Therapist |

Course Recommendations:

| | 9th Grade | 10th Grade | 11th Grade | 12th Grade |
|---|---|---|---|---|
| History | Honors American History I | Honors American History II | Modern US History & Contemporary Issues<br>Ancient World History Choose 2<br>American Government<br>AP Government & Politics<br>Psychology | |
| Language Arts | English I | 1 ELA Credit | 1 ELA Credit<br>AND<br>Public Speaking | 1 ELA Credit<br>AND<br>Advanced Public Speaking |
| Mathematics | Honors Geometry OR | Honors Algebra II | Honors Pre-Calc Trig | AP Calculus OR<br>Statistics OR<br>Calculus |
| | Algebra I | Honors Geometry | Honors Algebra II | Honors Pre-Calc Trig OR<br>College Algebra OR<br>AP Statistics OR<br>Statistics |
| | Algebra IA | Algebra IB | Intro to Drafting OR Honors Geometry | Honors Algebra II OR<br>Algebra II Topics OR<br>Civil Engineering OR<br>Applied Mathematics |
| Science | General Science 9<br>OR<br>Honors Biology | Honors Biology<br>OR<br>AP Biology | PA Ecology<br>General Chemistry Choose 1<br>General Physics | |
| Mandatory Related Arts | | | PE / Health | PE / Health<br>Financial Literacy |
| Language | Spanish I<br>French I | Spanish II<br>French II | Spanish III | AP Spanish |
| Electives | Band<br>Chorus<br>Intro to Business<br>Advanced Office<br>Foods | | | |

## Career Technology Options: Child Development, Cosmetology, Culinary Arts, Protective Services, Service Occupations

| | 10th | 11th | 12th |
|---|---|---|---|
| History | Honors American History II | American Government<br>AP Government & Politics<br>Psychology<br>Ancient World History<br>Modern US History & Contemporary Issues | |
| Language Arts | 1 ELA Credit | 0.5 ELA Credit<br>AND<br>Public Speaking | 1 ELA Credit |
| Mathematics | Algebra IB | Honors Geometry OR<br>Intro to Drafting OR<br>Applied Mathematics | |
| | Honors Geometry | Algebra II Topics OR<br>Honors Algebra II OR<br>Civil Engineering OR<br>Applied Mathematics | |
| Science | Honors Biology | General Chemistry OR<br>General Physics OR<br>PA Ecology | |
| Elective | | | |

# Course List

The following is a list of all the courses offered and corresponding credit value and credit level.
All non-required courses will be offered based on student interest, enrollment, and viability of scheduling.

| Course No. | Course Name | Credit Value |
|---|---|---|
| ENGLISH LANGUAGE ARTS | | |
| 1107 | English Language Arts 7 | |
| 1108 | English Language Arts 8 | |
| 1183 | English 9 | 1.0 |
| 1146 | Composition 10 | 0.5 |
| 1140 | Dystopian Literature | 0.5 |
| 1141 | Short Stories | 0.5 |
| 1142 | British Literature | 0.5 |
| 1143 | World Literature | 0.5 |
| 1144 | Mystery | 0.5 |
| 1145 | American Literature | 0.5 |
| 1147 | Literature and Film | 0.5 |
| 1191 | AP Language and Composition | 1.0 |
| 1120 | AP Seminar (AP English 10) | 1.0 |
| XXXX | AP Research | 1.0 |
| 1132 | Public Speaking | 0.5 |
| 1131 | Advanced Public Speaking | 0.5 |
| 1133 | Digital Media | 0.5 |
| MATHEMATICS | | |
| 1207 | Math 7 | |
| 1281 | Math 7 Honors | |
| 1208 | Math 8 | |
| 1282 | Algebra I Honors 8 | 1.0 |
| 1210 | Algebra IA | 1.5 |
| 1211 | Algebra IB | 1.0 |
| 1222 | Algebra I | 1.5 |
| 1283 | Algebra II Honors | 1.0 |
| 1224 | Algebra II Topics | 1.0 |
| 1284 | Geometry Honors | 1.0 |
| 1235 | College Algebra | 1.0 |
| 1244 | Applied Mathematics | 1.0 |
| 1285 | Trigonometry/Pre-Calculus Honors | 1.0 |
| 1241 | Calculus Honors | 1.0 |
| 1286 | AP Calculus | 1.0 |
| 1242 | Statistics | 1.0 |

| | | |
|---|---|---|
| 1243 | AP Statistics | 1.0 |
| | | |
| SCIENCE | | |
| 1307 | Science 7 | |
| 1308 | Science 8 | |
| 1309 | General Science 9 | 1.0 |
| 1384 | Biology Honors with Lab | 1.5 |
| 1394 | AP Biology | 1.5 |
| 1319 | Forensic Science (Elective Credit) | 1.0 |
| 1323 | Pennsylvania Ecology | 1.0 |
| 1321 | Anatomy and Physiology | 1.0 |
| 1330 | General Chemistry | 1.0 |
| 1385 | Chemistry Honors with Lab | 1.5 |
| 1331 | AP Chemistry | 1.5 |
| 1340 | General Physics | 1.0 |
| 1386 | College Level Physics /with Lab | 1.5 |
| | | |
| STEM | | |
| XXXX | STEM Exploration | |
| 1352 | Introduction to Engineering Design | 1.0 |
| 1360 | Introduction to Engineering Technology | 1.0 |
| 1363 | Technical Essentials | 0.5 |
| 1364 | Engineering Design Essentials | 0.5 |
| 1362 | Introduction to Drafting | 1.0 |
| 1353 | Principles of Engineering | 1.0 |
| 1349 | Principles of Engineering | 0.5 |
| 1354 | Digital Electronics | 1.0 |
| 1355 | Civil Engineering and Architecture | 1.0 |
| 1361 | Computer Science Essentials | 1.0 |
| 1356 | AP Computer Science Principles | 1.0 |
| 1357 | Computer Integrated Manufacturing | 1.0 |
| 1357A | Computer Integrated Manufacturing A | 0.5 |
| 1357B | Computer Integrated Manufacturing B | 0.5 |
| 1358 | Engineering Design and Development | 1.0 |
| 1359 | AP Computer Science A | 1.0 |
| | | |
| SOCIAL STUDIES | | |
| 1407 | World Geography | |
| 1408 | Civics and Government | |
| 1481 | American History I Honors | 1.0 |
| 1484 | Ancient World History Honors | 1.0 |
| 1485 | American History II Honors | 1.0 |
| 1412 | Modern U.S History and Contemporary Issues | 1.0 |

| | | |
|---|---|---|
| 1430 | American Government | 1.0 |
| 1491 | AP United States Government and Politics | 1.0 |
| 1425 | Psychology | 1.0 |

WORLD LANGUAGES

| | | |
|---|---|---|
| 1171 | Spanish I | 1.0 |
| 1172 | Spanish II | 1.0 |
| 1173 | Spanish III | 1.0 |
| 1174 | AP Spanish | 1.0 |
| 1161 | French I | 1.0 |
| XXXX | French II | 1.0 |

BUSINESS EDUCATION

| | | |
|---|---|---|
| 1607 | Career Education 7 | |
| 1608 | Career Education 8 | |
| 1388 | Computers 7 | |
| 1389 | Computers 8 | |
| 1600 | Introduction to Business | 0.5 |
| 1601 | Accounting I | 1.0 |
| 1612 | Accounting II | 1.0 |
| 1602 | Web Page Design | 0.5 |
| 1603 | Entrepreneurship | 0.5 |
| 1604 | Advanced Office | 0.5 |
| 1634 | Marketing | 0.5 |
| 1613 | Business Law | 0.5 |
| 1245 | Financial Literacy | 0.5 |

MUSIC EDUCATION

| | | |
|---|---|---|
| 1701 | Band* | 0.5 |
| 1702 | Chorus* | 0.5 |
| 1706 | Music Theory | 0.5 |

ART EDUCATION

| | | |
|---|---|---|
| 1809A | Art 7 | |
| 1808 | Art 8 | |
| 1800 | Art Foundations | 0.5 |
| 1814 | Art Foundations | 1.0 |
| 1802-1807 | Studio Art II, III | 1.0/.05 |
| 1812 | Advanced Studio Art | 1.0/.05 |
| 1811 | Graphic Design | 0.5 |
| 1810 | 3D | 0.5 |
| 1850 | Photography | 0.5 |

HEALTH AND PHYSICAL EDUCATION

| | | |
|---|---|---|
| 1907 | T7 Phys Ed | |
| 1908A | 8 Health/PE | |
| 1915 | MS Phys Ed | |
| 1909 | Health/Physical Education 9* | 0.5 |
| 1902 | Health 10* | 0.5 |
| 1910 | Physical Education 11* | 0.5 |
| 1911 | Physical Education Elective* | 0.5 |

* Courses are not included in the calculation of class rank and GPA.

# Course Descriptions

## Art Education

**Art 7**
Grade 7 (1807)
Students will create pieces that expand their knowledge of the elements of art and principles of design. Students will explore the use of varying artistic materials and techniques. Students will show knowledge of specific artists and artworks throughout art history. The students will use art history as the inspiration for art making.

**Art 8**
Grade 8 (1808)
Students will create pieces that demonstrate mastery of the elements of art and principles of design. Students will be introduced to a sampling of artistic materials and techniques. Students will begin to explore their own personal aesthetics, making personal choices about the creation of their art. The course will give the students a good indication of what further art study will look like.

**Art Foundations** (1800) Credit: 0.5
(1814) Credit 1.0

Grade 9 -12
This course is for students who are interested in learning how to draw using many art mediums. Designed for first year art students, this course will cover techniques in pencil, watercolor, mark making, collage, and acrylic paint. There will be sketchbook requirements to aid in the student's artistic growth. This course is for students who love art and want to learn more, and is a prerequisite for all other studio art courses and 3D.

**Studio Art I, II, III** (I-1803, II-1805, III-1807) Credit 1.0
(I-1802; II-1804; III-1806) Credit 0.5

Grade 10-12
Prerequisite: Art Foundations
These courses are a continuation of art foundations, designed to help students strengthen their basic drawing skills, and further challenge them with a variety of two and three dimensional media. Techniques will be covered in pencil, charcoal, colored pencil, mark making, watercolor, acrylic paint and mixed media. There will be sketchbook requirements to aid in the student's artistic growth. These courses are geared toward students who love art and want to learn more and improve their overall skill and aesthetics. Studio Art II, and III represent the number of years electing to take art.

**Advanced Studio Art** (1812) Credit 1.0
(1813) Credit 0.5

Grade 12
Prerequisite: Art Foundations, Studio Art I, Studio Art II
This course is a college preparation course for gifted art students who plan to pursue art as a career. The course is designed to provide students with ample opportunities to develop their creative potential in various media, as well as their understanding of visual communication and appreciation. Emphasis will be placed on creating and preparing an art portfolio. Sketchbook and summer work are requirements. The art major course provides intensive studio experience needed to prepare a portfolio for college admission. The emphasis in most projects is on career application in design, commercial art, and industry while developing the student's own personal style.

**Graphic Design** (1811) Credit: 0.5
Grade 11-12
Scheduling Note: Priority will be given to students in grade 12
This course is designed to develop skills in Adobe Illustrator and Adobe Photoshop. Students will study the vast world of Graphic Design. Students will research careers and will work on projects as if they were designing for a specific customer. Students will create Photo manipulations as well. Any student electing to take graphic design will need access to a camera and computer. Additionally students will participate in Adobe Certified Professional exams- receiving ACA accreditation upon completion of the course.

**3D** (1810) Credit: 0.5
Grade 10-12
Prerequisite: Art Foundations
3D seeks to expand your understanding of design theory as it relates to the Three Dimensional World. This course will focus only on 3D artworks. Techniques in ceramics, sculpture, plaster, cardboard construction, etc. will be explored.

**Photography** (1850) Credit: 0.5
Grade 11-12
Scheduling Note: Priority will be given to students in grade 12
This course covers basic concepts and practice of digital photography, including understanding and use of the camera, lenses, and other basic photographic equipment. The course will address aesthetic principles as they relate to composition, space, exposure, light and color. Additionally students will work with Adobe lightroom as they explore editing techniques.

# Business Education

**Career Education 7**
Grade 7 (1607)
This course continues to explore the features and capabilities of career cruising while students transition to middle school. Students will complete personal inventories and explore personal interests and career clusters related to their interests while also learning about digital citizenship. Students will continue to populate their career portfolio with evidence pieces related to potential future careers.

**Career Education 8**
Grade 8 (1608)
This course explores career choices with an emphasis on preparing students for focused course selections in high school and for their first job. Students will revisit their personal inventories, analyze changes to their related career clusters, and complete a resume and job application. The responsibilities associated with computer usage and digital citizenship will be reviewed so all students are equipped to effectively utilize their laptop in high school.

**Computers 7**
Grade 7 (1388)
This course provides an overview of Microsoft applications including Windows, the Office Suite: Word, PowerPoint, Excel. Students will need to follow oral and written directions and demonstrate good work habits to be successful in the course.

**Computers 8**
Grade 8 (1389)
This course provides a more in depth tutorial of Microsoft Applications including Windows, the Office Suit: Word, PowerPoint, and Excel. Students will need to follow oral and written directions and demonstrate good work habits to be successful in the course.

**Financial Literacy**
Grade 12 (1245) Credit: 0.5
Prerequisite: None
This class is designed to prepare seniors for the financial transition to adulthood and life after high school. The topics covered will include career and college choices, opportunities, time and money management, budgeting, funding an apartment, buying a home, insurance, taxes, investing, building a good credit history and maintaining a good credit history.
This course is mandatory for all 12th Grade non-CTC students.

**Introduction to Business**
Grades 9 through 12 (1600) Credit: 0.5
Prerequisite: None
This class will give students an overview of business. Emphasis is placed on their roles in the community – worker, citizen, and consumer.

**Accounting I**
Grades 9 through 12 (1601) Credit: 1.0
Prerequisite: None
This course is designed to help students understand the basic principles of the accounting cycle. Emphasis is placed on the analysis and recording of business transactions; preparation and interpretation of financial

statements; accounting systems; banking and payroll activities; basic types of business ownership; and accounting career orientation. Mathematical skills and critical thinking are reinforced. In addition to simulations utilizing various technologies, projects, meetings, conferences, and FBLA competitions provide opportunities for application of industrial competencies.

**Accounting II**
Grades 10 through 12 (1612) Credit: 1.0
Prerequisite: Accounting I
This course is a continuation of the concepts learned in Accounting I and includes units of study pertaining to partnerships, corporations, and management use of accounting data.

**Web Page Design**
Grades 9 through 12 (1602) Credit: 0.5
This course introduces students to basic web design using HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets). Throughout the course students are introduced to planning and designing effective web pages; implementing web pages by writing HTML and CSS code; enhancing web pages with the use of page layout techniques, text formatting, graphics, images, and multimedia; and producing a functional, multi-page website.

**Entrepreneurship**
Grades 10 through 12 (1603) Credit: 0.5
In this course students will learn the fundamentals of organizing and starting a small business as they create their own completed, bound business plan. The course covers such topics as the challenges of entrepreneurship, building the business plan, strategic planning, franchising, and forms of ownership, marketing, pricing, cash flow, financial planning, putting the plan to work, ethical/legal concerns, and the regulation of the environment. They will also develop an understanding of what it means to be an entrepreneur and how they can use their unique skills and talents to start a small business venture.

**Advanced Office**
Grades 9 through 12 (1604) Credit: 0.5
This project-oriented course will utilize Microsoft Office and include instruction on keyboarding, word processing, spreadsheets, databases, presentation and publishing software. Students will be able to use these skills for their personal use, for assignments required in other classes, and for future secondary education and/or workplace activities. Assessment techniques using computer-aided testing will also be practiced.

**Marketing**
Grades 10 through 12 (1605) Credit: 0.5
This course explores the world of marketing. Students will find out what it takes to market a product or service in today's fast-paced business environment. They learn the fundamentals of marketing using real-world business examples. Emphasis will be placed on all aspects of marketing including: planning, consumer behavior, product research, advertising, and communications. The course will provide insight into the characteristics, organization, and operation of the business.

**Business Law**
Grades 10 through 12 (1613) Credit: 0.5
Students in this course develop an understanding of business and personal law, legal procedures and remedies, rights and duties of citizens, consumers, workers and business owners, and apply principles to legal situations. Topics of study include ethics, juvenile justice, courtroom procedure and civil, criminal, consumer, contract, sale, credit, employment, housing and business law.

# English Language Arts

All English Language Arts classes are designed to provide students with a strong foundation to prepare them for academic and professional reading, writing, and communication. In all courses students will learn and practice strategies and processes to enhance skills in comprehension, persuasion, investigation, problem solving, evaluation, and explanation. In addition to preparing students for real world applications, these courses are designed to prepare students to use literature and writing to attain professional and personal goals.

**English Language Arts 7**
Grade 7 (1107)
The Seventh Grade English Language Arts course focuses on multiple genres of literature and several writing styles that will be taught and practiced throughout the year. Students will work independently and collaboratively at developing reading, vocabulary, spelling, grammar, writing, listening, and presentation skills. All of these skills will be embedded in a variety of units that will require students to analyze text, make inferences, and think both critically and abstractly. Module 1 focuses on genre exploration, independent reading, and foundational skills. The focus of Module 2 is nonfiction and research. Module 3 features an in depth analysis of literature and craft. The final modules examine poetry and argumentative writing.

**English Language Arts 8**
Grade 8 (1108)
The Eighth Grade English Language Arts course builds upon skills developed in seventh grade. This course continues to focus on multiple genres of literature and several writing styles that will be taught and practiced throughout the year. Students will work independently and collaboratively at developing reading, vocabulary, spelling, grammar, writing, listening, and presentation skills. All of these skills will be embedded in a variety of units that will require students to analyze text, make inferences, and think both critically and abstractly. Module 1 focuses on genre exploration, independent reading, and foundational skills. The focus of Module 2 is nonfiction and research. Module 3 features an in depth analysis of literature and craft. The final modules examine poetry and argumentative writing.

**English 9**
Grade 9 (1183) Credit: 1.0
This course is designed to support students' development in reading, writing, listening, speaking, and research skills. This course emphasizes reading, discussing, and writing about fiction and non-fiction selections. Critical thinking, vocabulary development, study skills, college preparation activities as well as the application of skills to various assessments are stressed. Students analyze text, cite evidence, and respond critically to their learning. Students take ownership of their learning through goal-setting, annotation, reflection, independent text selection, and activities that allow for peer collaboration. In addition, students are encouraged to exchange views with their peers while formulating and defending their own perspectives. Students will develop the essential skills required to be successful throughout college and future careers. Ultimately, students will end the course taking the Keystone Exam as administered by PA Dept. of Education.

**Composition 10**
Grade 10 (1146) Credit 0.5
Composition 10 is a standards-based course focused on the four major modes of writing: informative, argumentative, narrative, and research. This semester-length class will instruct students on the writing process, so they will be able to convey complex ideas, concepts, and information clearly and accurately. Students will be immersed in the research process, from constructing strong, defensible thesis statements to evaluating sources through to writing a multi-page academic paper. Grammar instruction will be emphasized, both independently and in context.

**Dystopian Literature** (1140) Credit 0.5

Grades 10-12

The novels and short stories in this course are all defined by their dystopian setting - a society characterized by oppression and injustice. Dystopian stories challenge readers to reflect on global issues and the role of the individual in society. Classic works by George Orwell and Ray Bradbury will be highlighted, along with more contemporary literature, to further illustrate the dystopian theme. This course will focus on the importance of setting in establishing the central ideas in the text and will require students to make connections between the classic works and the contemporary works. Throughout the course of study, the four aspects of language – reading, writing, speaking, and listening – will be emphasized. Class discussion and academic writing will be expected in response to the readings. Students will also develop the skills needed to determine an author's intent, recognize the techniques authors use to deliver their messages, and evaluate the literary value of the chosen works.

**Short Stories** (1141) Credit 0.5

Grades 10-12

Students will read several short stories and study the connecting central ideas of those stories. The class will explore the evolution of the short story as a literary genre and will critically analyze the idea of the "single effect." The literary elements of character, setting, plot, conflict, point of view, and central idea will be highlighted. This genre allows students to dig deep into the ways in which authors structure stories for maximum impact and focus on the importance of word choice and sentence structure to create plot. Mastery of reading, writing, speaking, and listening skills will be a focus of the course.

**British Literature** (1142) Credit 0.5

Grades 11-12

The British Literature course covers seminal works of literature from the Anglo-Saxon period to the start of the Romantic Era. *Beowulf* and *Paradise Lost* are featured along with at least one Shakespeare play. Elements of poetry and classic works of non-fiction are also presented. Using these works as a foundation, students will recognize and discuss themes and connections that cross cultures. Emphasis will be on recognizing the connections between history and literature and how the history of the time period impacts the literature written during that time period. Written expression and class discussion will be emphasized in response to the readings and research skills will be taught and practiced to gain mastery of the research process.

**World Literature** (1143) Credit 0.5

Grades 10-12

This course is a study of representative works of world literature. Students read and analyze literary works, including the novel, short story, lecture, and poetry from various cultures with an emphasis placed on key ideas that express the commonality of the human spirit and experience across cultures. This course stresses critical thinking in the areas of reading, writing, and oral communication. Students are expected to complete a novel, short stories, poems, and nonfiction texts, as well as be able to discuss, analyze, and evaluate these pieces. Written expression and class discussion will be emphasized in response to the readings.

**Mystery** (1144) Credit 0.5

Grades 10-12

This course is a genre study. Students read and analyze works from the genre's masters, Agatha Christie and Sir Arthur Conan Doyle, as well as a classical piece from William Faulkner. A focus will be placed on the relationship of the ten essential elements of mystery. In addition, students will examine real life mysteries and complete a non-fiction research project. Written expression and class discussion will be emphasized in response to the readings. Additional activities include the completion of a non-fiction research project and presentations given throughout the semester within the context of the course.

**American Literature** (1145) Credit 0.5

Grades 10-12

Students will analyze works of prose, drama, and fiction as an expression of individual or communal values in relation to the social, political, or cultural contexts. Through a variety of text types students will think critically including inquiry, analysis, evaluation, and synthesis of information. This course emphasizes writing through the analysis of American literature. Students build knowledge, analyze ideas, delineate arguments, and develop writing, collaboration, and communication skills.

**Literature and Film** (XXXX) Credit 0.5

Grades 11-12

The Literature and Film class will explore classic works of literature and the film adaptations of those stories. Students will compare and contrast the two mediums and discuss the reasons for any variations. This semester-length course will require students to make connections between the films and the source material and be able to express understanding through class discussion and academic writing. Throughout the course of study, the four aspects of language – reading, writing, speaking, and listening – will be emphasized.

**AP Language and Composition**

Grades 11 and 12 (1191) Credit: 1.0

Prerequisite: English 9 Honors and Composition 10; Proficient on Keystone Literature and/or Department Chair Review of Keystone Scores

The AP English Language and Composition course cultivates the reading and writing skills that students need for college successes and for intellectually responsible civic engagement. This course guides students in becoming curious, critical, and responsive readers of diverse texts, and becoming flexible, reflective writers of texts addressed to diverse audiences or diverse purposes. The reading and writing students are exposed to will deepen and expand their understanding of how written language functions rhetorically. This course cultivates the rhetorical understanding and use of written language by directing students' attention to written/reader interactions in their reading and writing of various formal and informal genres.

This course prepares students to take the national AP exam in May, which may result in college credit.

**AP Seminar** (XXXX) Credit: 1.0

Grades 10-12

Prerequisite: English 9 Honors

Students will develop and practice the skills in multidisciplinary research, collaboration, and communication they will need in any academic discipline. Students will investigate topics in a variety of subject areas, write research-based essays, and design and give presentations both individually and as part of a team. Students will analyze topics through multiple lenses to construct meaning or gain understanding, investigate, and propose solutions to real-world problems. This course qualifies students to earn The Advanced Placement Capstone diploma based on two year-long AP Courses: AP Seminar and AP Research.

**AP Research** (XXXX) Credit: 1.0

Grades 10-12

Prerequisite: English 9 Honors and AP Seminar

AP Research, the second course in the AP Capstone experience, allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000–5,000 words (accompanied by a performance, exhibit, or product where

applicable) and a presentation with an oral defense.

## Supplemental English Language Arts Electives (Elective Credit Only)

**Public Speaking**
Grade 11 (1132) Credit: 0.5
This beginner's speech class is mandatory for all students in grade 11 and will emphasize the importance of verbal and nonverbal communication. Students will learn how to research a topic by locating sources and evaluating the credibility and reliability of information. Students will conduct research and write and deliver effective speeches. The fundamentals of impromptu speaking and listening skills are incorporated into the course. Students will write cover letters, resumes, and peer and professional evaluations. Types of speeches include informative, persuasive, and demonstrative. Students will also have a speaker's choice presentation (e.g. eulogy, farewell, humorous, nomination, and acceptance). Some speeches will have technology requirements. Students will also introduce a speaker and participate in a mock job or college interview.

**Advanced Public Speaking**
Grade 12 (1131) Credit: 0.5
Prerequisite: Public Speaking
Advanced Speech will build upon students' general knowledge of communication through public speaking. The course will enable students to gain more experience in preparing to speak formally and informally. Students will refine techniques learned in Public Speaking. In addition to a variety of speeches presented, assignments also include telephone skills, assertive communications, analysis of famous and historical speeches, group problem solving, and morning announcements, mock interviews with area businessmen and women, and college essay writing. The technology component includes podcasts and Google Earth. Each student will have an individual secured website where his/her videotaped speeches will be uploaded to allow the student to view and critique his/her own speech at home. This course could be taken as Dual Enrollment which would make it eligible for college credit at Keystone and/or Lackawanna Colleges.

**Digital Media**
Grades 9 through 12 (1133) Credit: 0.5
Digital Media is an elective course which provides motivated students with an introductory experience in media production. This intensive hands-on course explores camera operation, script writing, lighting, audio production, video editing and the effects of television on viewers. Students will be provided with all the basic skills necessary to produce a live daily news program, special video features, public service announcements, short films, and commercials. This course will also equip students with the skills necessary to function in a technology and media- centered society.

# Physical Education

**Physical Education**
Grade 7 (1900)
This program stresses the knowledge and skills involved in both team and individual sports and the development of positive attitudes concerning physical conditioning and lifetime sports. Activities include touch football, soccer, basketball, volleyball, softball, ultimate Frisbee, weight training, and dance.

**Health and Wellness 8**
Grade 8 (1901)
The topics in this course include drug education, personal hygiene, disease, sexual education, AIDS, fitness, mental health and nutrition education. Emphasis is placed on the knowledge and decision-making skills that will enable students to contribute effectively to their present and future health. This course stresses the knowledge and skills involved in both team and individual sports and the development of positive attitudes concerning physical conditioning and lifetime sports. Activities include touch football, soccer, basketball, volleyball, softball, ultimate Frisbee, weight training, and dance.

**Health/Physical Education 9**
Grade 9 (1909) Credit: 0.5
The topics in this course include drug education, personal hygiene, disease, sexual education, AIDS, fitness, mental health and nutrition education. Emphasis is placed on the knowledge and decision-making skills that will enable students to contribute effectively to their present and future health. This course stresses the knowledge and skills involved in both team and individual sports and the development of positive attitudes concerning physical conditioning and lifetime sports. Activities include touch football, soccer, basketball, volleyball, softball, ultimate frisbee, weight training, and dance.
This course is mandatory for all 9th Grade students.

**Health 10**
Grade 10 (1902) Credit: 0.5
The topics in this course include drug education, personal hygiene, disease, sexual education, AIDS, fitness, mental health and nutrition education. Emphasis is placed on the knowledge and decision-making skills that will enable students to contribute effectively to their present and future health. This course stresses the knowledge and skills involved in both team and individual sports and the development of positive attitudes concerning physical conditioning and lifetime sports. Activities include touch football, soccer, basketball, volleyball, softball, ultimate frisbee, weight training, and dance.
This course is mandatory for all 10th Grade students.

**Physical Education 11**
Grade 11 (1910) Credit: 0.5
The topics in this course include drug education, personal hygiene, disease, sexual education, AIDS, fitness, mental health and nutrition education. Emphasis is placed on the knowledge and decision-making skills that will enable students to contribute effectively to their present and future health. This course stresses the knowledge and skills involved in both team and individual sports and the development of positive attitudes concerning physical conditioning and lifetime sports. Activities include touch football, soccer, basketball, volleyball, softball, ultimate frisbee, weight training, and dance.
This course is mandatory for all 11th non-CTC Grade students.

**Physical Education Elective**

Grades 9-12 (1911) Credit: 0.5
(1912) Credit: 1.0

This elective course provides students with the opportunity to acquire the knowledge and skills necessary to successfully participate in a wide range of both team and individual sports. Lessons will focus on skill development as well as an understanding of basic and advanced strategy in order to cultivate life-long participation in a variety of sports. Additionally, this course will also provide students with a fundamental knowledge of fitness components and how they apply to human movement. Students will have the opportunity to participate in a variety of fitness activities and ultimately design a program tailor-made to their specific goals and needs.

# Mathematics

**Math 7**
Grade 7 (1207)
This course focuses on understanding and applying proportional relationships, operations with rational numbers, linear expressions and equations, and solving problems related to 2 and 3 dimensional figures, and drawing inferences about populations based on samples.

**Math 7 Honors**
Grade 7 (1281)
Prerequisite: 90% Math 6; PSSA Scores; PVAAS Projection; Teacher Recommendation
This course focuses on understanding and applying proportional relationships, operations with rational numbers, linear expressions and equations, and solving problems related to 2 and 3 dimensional figures, and drawing inferences about populations based on samples. Early 8th grade topics will be introduced such as linear equations with multiple solutions, as well as an introduction to linear functions.

**Math 8**
Grade 8 (1208)
This course focuses on expressions and linear equations, identifying and writing functions to describe relationships, graphing various relationships, solving problems related to 2 and 3 dimensional figures. This course emphasizes mathematical communication, collaboration, and problem solving.

**Algebra I Honors 8**
Grade 8 (1282) Credit: 1.0
Prerequisite: 88% Math 7 Honors; 90% Math 7 or Math 8; PVAAS Projection; Teacher Recommendation
Algebra I requires each student to compute, problem-solve, make/test conjectures, and apply math concepts to real-life scenarios in an accelerated manner. Topics include operations with real numbers, variables, algebraic expressions, equations/inequalities, polynomials, factoring, graphing, rates of change, functions, data analysis, probability, problem solving with 2 and 3 dimensional figures. Students will communicate mathematically using multiple representations.

**Algebra IA**
Grades 9 and 10 (1210) Credit: 1.0
Algebra IA requires each student to compute, problem-solve, make/test conjectures, and apply math concepts to real-life scenarios. Topics include operations with real numbers, variables, algebraic expressions, equations/inequalities, graphing, rates of change, functions, and data analysis. Students will communicate mathematically using multiple representations.

**Algebra IB**
Grades 9 and 10
Prerequisite: Algebra IA (1211) Credit: 1.0
Algebra IB requires each student to compute, problem-solve, make/test conjectures, and apply math concepts to real-life scenarios. Topics include operations with algebraic expressions, equations/inequalities, systems of equations, polynomials, factoring, graphing, functions, data analysis, and probability. Students will communicate mathematically using multiple representations.

**Algebra I**
Grades 9 and 10 (1222) Credit: 1.5
Algebra I requires each student to compute, problem-solve, make/test conjectures, and apply math concepts to real-life scenarios. Topics include operations with real numbers, variables, algebraic expressions,

equations/inequalities, systems of equations, polynomials, and factoring, graphing, rates of change, functions, data analysis, and probability. Students will communicate mathematically using multiple representations.

**Geometry Honors**
Grade 9 (1284) Credit: 1.0
Prerequisite: Algebra I; Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores
Geometry unifies concepts of Geometry, Algebra, and arithmetic. Logical methods of mathematical thinking will be emphasized while studying surface area, volume of two and three dimensional objects, congruence, similarity, formal proofs, parallel and perpendicular lines, polygons, right triangles, trigonometry, equations/inequalities, circles, probability, and real-life applications. Students will use enhanced problem-solving and reasoning skills to compute, test conjectures and apply concepts to real-life scenarios. Students will communicate mathematically using multiple representations.

**Geometry**
Grade 10, 11, 12 (1230) Credit: 1.0
Prerequisite: Algebra I; Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores
Geometry unifies concepts of Geometry, Algebra, and arithmetic. Logical methods of mathematical thinking will be emphasized while studying surface area, volume of two and three dimensional objects, congruence, similarity, formal proofs, parallel and perpendicular lines, polygons, right triangles, trigonometry, equations/inequalities, circles, probability, and real-life applications. Students will use enhanced problem-solving and reasoning skills to compute, test conjectures and apply concepts to real-life scenarios. Students will communicate mathematically using multiple representations.

**Applied Mathematics**
Grades 11 and 12 (1244) Credit: 1.0
Prerequisite: Algebra I or Algebra IA and Algebra IB, Geometry; Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores
The math class will be a virtual classroom where the students put into practice the skills they are learning in the curriculum. The curriculum begins by students coming in on the first day and applying for a job, then teaching the students how to earn money and pay their bills, a practice that continues throughout the course, while the units progress to cover topics that affect how they choose to spend their money. The focus is on applying math skills to real world situations, not the mechanics of how to do the math. Students will develop the ability to get jobs in specific fields, pay bills, save and invest money, and manage their homes. At the end of the course, they buy their grades with the money they have earned.

**Algebra II Honors**
Grades 10 and 11 (1283) Credit: 1.0
Prerequisite: Algebra I or Algebra IA and Algebra IB; Geometry Honors; Proficient on Keystone Algebra and/or Department Chair Review of Keystone Scores
This course requires students to use enhanced communication, problem-solving, and reasoning skills to compute, make/test conjectures, and apply math concepts to real-life scenarios. Topics include operations with real and complex numbers, variables, algebraic expressions, exponents, radicals, equations/inequalities, polynomials, factoring, graphing, rates of change, a variety of functions, data analysis, and probability. Students will communicate mathematically using multiple representations.

**Algebra II Topics**
Grades 10 and 11 (1224) Credit: 1.0
Prerequisite: Algebra I or Algebra IA and Algebra IB; Geometry Honors or Geometry; Proficient on Keystone Algebra and/or Department Chair Review of Keystone Scores

This course requires students to use enhanced communication, problem-solving, and reasoning skills to compute, make/test conjectures, and apply math concepts to real scenarios related to technical, trade, and health programs of study. Topics include operations with real and complex numbers, variables, algebraic expressions, exponents, radicals, equations/inequalities, polynomials, logarithms, factoring, graphing, rates of change, a variety of functions, data analysis, and probability. Students will communicate mathematically using multiple representations and emphasis will be placed on the application of fractions, decimals, and percents to real-life problems.

**College Algebra**
Grade 12 (1235) Credit: 1.0
Prerequisite: Algebra I or Algebra IA and Algebra IB, Geometry Honors or Geometry, Algebra II Honors, Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores
College Algebra is considered a preparatory course for seniors who will major in a nonmathematical or non-scientific program when entering college. This course covers a variety of topics including basic algebra, set notation, logic, number theory, matrices, numeration systems, and consumer mathematics. This course could be taken as Dual Enrollment which would make it eligible for college credit at Keystone and/or Lackawanna Colleges.

**Trigonometry/Pre-Calculus Honors**
Grades 11 and 12 (1240) Credit: 1.0
Prerequisite: Algebra I or Algebra IA and Algebra IB, Geometry Honors, Algebra II Honors, Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores
Trigonometry/Pre-Calculus Honors is a course that integrates algebra, geometry, and trigonometry in an accelerated manner. This course focuses on making connections between topics and provides opportunities to apply knowledge to real-life problems. Topics of study include polynomial functions, complex numbers, rational functions, trigonometric functions and their inverses, logarithmic and exponential functions, inverse functions, vectors and matrices, and parametric and polar curves.

**Calculus Honors**
Grade 12 (1285) Credit: 1.0
Prerequisite: Algebra I, Geometry Honors, Algebra II Honors, Trigonometry/Pre-Calculus, Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores
Calculus is a college preparatory course for students who will major in science, engineering, math, and other related fields or professional courses. Students are expected to use graphical, numerical and analytical approaches to problem solving. The topics of study include properties of functions, graphs, limits, derivatives, and integrals. Topics are applied to real-world problems.

**AP Calculus**
Grade 12 (1286) Credit: 1.0
Prerequisite: Algebra I, Geometry Honors, Algebra II Honors, Trigonometry/Pre-Calculus, Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores
This course is designed to prepare students for the AP Calculus Test as well as college level calculus courses. This honors mathematics course is different from the equivalent standard level course in the fast pacing, the quality of the work expected, and the quantity of the work required inside and outside of the classroom. Students are expected to use graphical, numerical and analytical approaches to problem solving. Emphasis is placed on developing concepts, connecting concepts, and applying these concepts to solve complex problems. The topics of study include graphs, limits, derivatives, and integrals. Students extend their understanding of these topics using technology, cooperative learning, and mathematical writing.

**Statistics**
Grades 11 and 12 (1242) Credit: 1.0
Prerequisite: Algebra I, Geometry Honors, Algebra II Honors, Proficient on Keystone Algebra Assessment and/or Department Chair Review of Keystone Scores
Students will work with probability, data collection, descriptive and inferential statistics, probability, and technological tools to analyze statistics. This mathematics course is an accelerated level course in both the quality of the work expected and the quantity of the work required inside and outside of the classroom. The main focus of the course will be exploring data, planning a study, producing models using probability theory, and making statistical inferences. Students will work with statistical measures of centrality and spread, methods of data collection, methods of determining probability, binomial and normal distributions, hypothesis testing, and confidence intervals. Students will use multiple representations to present data including written descriptions, numerical statistics, formulas, and graphs.

**AP Statistics**
Grades 11 and 12 (1243) Credit: 1.0
Prerequisite: Algebra I, Geometry Honors, Algebra II Honors, Proficient on Keystone Algebra Assessment and/or Department Chair Review of Keystone Scores
AP Statistics is offered to students following the successful completion of Algebra II Honors or above and who have the recommendation of their math teacher. This is a fast-paced, intensive course equivalent to a one-semester, introductory, non-calculus-based college course in statistics. Topics studied in detail include descriptive and inferential statistics, basic concepts of probability, probability distributions, applications of the normal distribution, confidence intervals, hypothesis testing, and correlation and regression. Class activities will involve exploring data, planning a study, anticipating patterns, and statistical inference. Students will learn to use a graphing calculator to analyze data in each class. Students who take this course will take the Advanced Placement Statistics Test given in May.

# Music Education

**Band**

Grades 7 through 12 (1701) Credit: 0.5

Students taking this class are provided with a balanced, comprehensive study of music through concert band. The course provides opportunities to foster and refine musical expression through instrumental performance, analytical/evaluative skills, and aesthetic judgment.

**Chorus**

Grades 7 through 12 (1702) Credit: 0.5

Students will sing and explore many different styles and periods of music. Students will participate in various performances throughout the year.

**Music Theory**

Grades 9 through 12 (1706) Credit: 0.5

This course acquaints the serious music student with a working knowledge of the essentials of scale construction, chord make-up, chord construction, harmonization of a given melody and a general background in the writing of music. Time is spent on singing and dictation of melodies designed to prepare the prospective college-bound music major with a sufficient musical background.

# Science & STEM

**Science 7**
Grade 7 (1307)
This course is designed to give students the background in: properties of matter, atoms and elements, periodic table and chemical bonding, motion, forces, energy, heat.

**Science 8**
Grade 8 (1308)
This course is designed to give students the background they need in : explanation of living things, viruses/bacteria, protists/fungi, plants, populations/communities, ecosystems/biomes, living resources, energy resources.

**General Science 9** (1309) Credit 1.0
This course is designed to provide an opportunity to investigate areas of Ecological and Environmental Sciences as well as Biochemistry and how they are an integral part of everyday life. Students will investigate the composition, diversity and how living things are connected to earth. The fundamental concept of evolution will lead to investigations into explorations of the living world, the physical environment, and the interactions that occur in and between ecosystems. Biochemistry will involve the study of the molecular composition of living cells, the organization of biological molecules within the cell, and the structure and function of these biological molecules. Students will engage in investigations to understand and explain the behavior of living things in a variety of scenarios that incorporate scientific reasoning, analysis, communication skills and real-world applications.

**Biology Honors with Lab**
Grade 9 & 10 (1384) Credit: 1.5
Prerequisite: Successful completion of Algebra I (may be taken simultaneously). Proficient or Advanced on the 8th Grade Science PSSA and Reading PSSA or successful completion of General Science 9.
The course is designed to enable the student, through a series of classroom instruction and labs, to become aware not only of his own existence, structure, and functions, but of other forms of life from the simplest to the more complex. Students enrolled in the accelerated section of Biology are responsible for additional independent exercises including scientific problem solving, experimental design, reading, writing, and application of concepts based on a more in depth focus on course topics. It is designed to increase critical thinking skills, research, communication, and collaboration abilities and to develop a more comprehensive understanding of biological principles.

**AP Biology with Lab** (1394) Credit 1.5
Prerequisites: Honors Biology with a minimum grade of 90%; Concurrent enrollment or successful completion of Honors Chemistry with Lab; Proficient on the Biology Keystone Exam, Proficient on the Literature Keystone Exam, Proficient on the Keystone Algebra Keystone and/or Department Chair Review of Keystone Scores
AP Biology is offered to students following the successful completion of Biology Honors or above and who have the recommendation of their Biology teacher. This is a fast-paced, intensive course equivalent to a two semester college introductory biology course. Topics covered include in-depth review of cell anatomy and physiology, mitosis and meiosis, cellular energetics, heredity and molecular genetics, the anatomy and physiology of plants and animals, and ecology. Primary emphasis is given to developing an understanding of concepts rather than memorizing terms and technical details. Summer work is required. The course will include taking the AP Biology Exam in May. This course is designed for college-bound students planning to major in any of the biological sciences.

**Pennsylvania Ecology** (1323) Credit 1.0

Pennsylvania Ecology incorporates the application of various concepts concerned with the interrelationships among components of the natural and human-made world. These components combine the disciplines of ecology, resource management, agriculture diversity, government and the impact of human actions on natural systems. This course focuses primarily on Pennsylvania watersheds, threatened and endangered species, pest management and the development of laws and regulations that protect, control and manage the environment to meet societal needs for long term sustainability. Pennsylvania Ecology offers a hands-on application in areas of study, including local outdoor field work in addition to classwork. Topics of study include: Watersheds & Wetlands, Renewable & Non-renewable resources, environmental health, agriculture and society, integrated pest management, ecosystems and their interactions, threatened, endangered and extinct species, humans and the environment, environmental laws and regulations, current events/local issues imbedded within each topic.

**Anatomy and Physiology**

Grades 11 and 12 (1321) Credit: 1.0

Prerequisite: Biology; Proficient on Keystone Biology and/or Department Chair Review of Keystone Scores

Anatomy and Physiology is an extensive, detailed introduction to the structure and function of the human body. It covers each of the body's systems in regard to terminology, structure, function, morphology, pathology, and clinical applications which reveal the most up-to-date procedures and technology. It is designed for students preparing for careers in health-related professions, such as nursing, occupational and physical therapy, medicine, dentistry, and medical technology. As a result of its scope, it is extremely useful for students pursuing the biological sciences, scientific technology, sports medicine, and forensics.

**General Chemistry**

Grades 11 and 12 (1330) Credit: 1.0

Prerequisite: Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores

This course provides an introduction to the fundamentals of chemistry with emphasis on applications of principles and concepts. Laboratory work and mathematical exercises are included.

**Chemistry Honors with Lab**

Grades 11 and 12 (1385) Credit: 1.5

Prerequisite: Algebra II; Biology; Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores, Teacher Recommendation

This course provides an introduction to the fundamentals of chemistry with an emphasis on principles and concepts. Laboratory work and mathematical exercises are included. This course will include a more in-depth study of mathematical calculations involved in chemistry. A good foundation in algebraic problem solving is required.

**AP Chemistry with Lab**

Grade 12 (1331) Credit: 1.5

Prerequisite: Chemistry Honors with Lab; Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores, Teacher Recommendation

This course is a college level class focusing on atomic theory, stoichiometry, the periodic table, bonding, molecular structure, interaction of gasses, solutions and their properties, thermodynamics, acids and bases, chemical kinetics, equilibrium, electrochemistry, and nuclear chemistry. This course will include a double laboratory period each week for a total of 162 hours of coursework. The student will be required to keep a laboratory binder documenting their laboratory activities and reports. AP Chemistry has a curriculum that has been directed by the College Board and is designed to prepare the student to take the AP Examination scheduled in May. This course is more rigorous than a high school chemistry course and will require extensive work outside of the classroom. Summer work is required.

**General Physics**
Grade 11/12 (1340) Credit: 1.0
Prerequisite: Proficient on Keystone Algebra I and/or Department Chair Review of Keystone Scores
This course is an introduction to the science of physics. Areas of study include mechanics, properties of matter, heat, sound, and light. Laboratory work and application projects are included.

**College Level Physics with Lab**
Grade 12 (1386) Credit: 1.5
Prerequisite: Honors Chemistry; Concurrently enrolled in Calculus or AP Calculus
This course is an accelerated introduction to the science of physics. Areas of study include mechanics, properties of matter, heat, sound, and light. Laboratory work and mathematical exercises are included.

**Supplemental Science Electives (Elective Credit Only)**

The following STEM courses are eligible for Elective credit only.

**STEM Exploration** (XXXX)

Grades 7 and 8

An activity-oriented program designed to help students explore math, science, and technology. Strong emphasis is placed on the design process. Students may choose to take this class in both seventh and eighth grades. In school years beginning during odd years, students will participate in exploratory activities related to chemical engineering, electricity, computer programming and mechatronics. In school years beginning during even years, students will participate in exploratory activities related to workshop safety, basic fabrication, computer aided design, rapid prototyping, and sustainable architecture.

**Forensic Science**

Grades 11 and 12 (1319) Credit: 1.0

Forensic Science is a high-interest course rich in exploration and lab investigation which applies and integrates many disciplines of scientific study such as Biology, Anatomy and Physiology, Chemistry, Physics, Entomology and Earth Science. This course surveys key topics in forensic science, including the application of the scientific process to forensic analysis, procedures and principles of crime scene investigation, physical and trace evidence, and the law and courtroom procedures from the perspective of the forensic scientist. The combination of basic theory, laboratory experiments and analysis of fictional crime scenarios, students learn about forensic tools, technical resources, forming and testing hypotheses, proper data collection, and responsible conclusions.

**Introduction to Engineering Design (IED)**

Grades 9 through 12 (1352) Credit: 1.0

This is the first foundational course for the high school Project Lead the Way curriculum. IED uses a design development process while enriching problem-solving skills. Students create and analyze models using specialized computer software.

**Introduction to Engineering Design**

Grades 9 through 12 (1364) Credit: 0.5

This half credit course is an abbreviated version of Introduction to Engineering Design. Students will gain experience applying the design process to define a real world problem, generate possible solution concepts, develop a solution and test it.

**Introduction to Engineering Technology (IET)**

Grades 9 through 12 (1360) Credit: 1.0

This course will provide students with an opportunity to explore and develop basic technical skills as they relate to engineering and technology and the product life cycle. Topics will include basic technical mathematics, technical communication and documentation, design process, workshop safety, and materials processing. Students will begin the course with an introductory fabrication experience, using basic hand tools and power tools to construct a physical model. As students progress, they will continue to explore the application of basic technical engineering concepts to occupational and educational opportunities that they may choose to pursue in the future.

**Technical Essentials**

Grades 9 through 12 (1363) Credit: 0.5

The purpose of this course is to allow students who are unable to schedule the full credit course, IET, the ability to schedule a technical STEM course. This course will provide students with the opportunity to gain exposure to the same types of experiences as Introduction to Engineering Technology, but in an abbreviated format.

Basic technical math, documentation, design process, and workshop safety will be emphasize

**Principles of Engineering (POE)**
Grades 10 through 12 (1353) Credit: 1.0
Prerequisite: Introduction to Engineering Design and Proficient on Algebra 1 Keystone and/or Department Chair Review of Keystone Scores, or approval by instructor.
This is the second foundational course for the high school Project Lead the Way curriculum. In POE, students explore technology systems and engineering processes to find out how math, science, and technology help people.

**Principles of Engineering (POE)**
Grades 10 through 12 (1349) Credit: 0.50
Prerequisite: Introduction to Engineering Design and Proficient on Algebra 1 Keystone and/or Department Chair Review of Keystone Scores, or approval by instructor.
This half credit course is the first half of the second foundational course for the high school Project Lead the Way curriculum. In POE, students explore technology systems and engineering processes to find out how math, science, and technology help people. This half credit course will focus on Energy and Power and Materials and structure.

**Civil Engineering and Architecture (CEA)**
Grades 11 and 12 (1355) Credit: 1.0
Prerequisite: Principles of Engineering or approval by instructor.
This is one of the specialization courses in the high school Project Lead the Way curriculum. In CEA, students learn about various aspects of civil engineering and architecture and apply their knowledge to the design and development of residential and commercial properties and structures. Students use 3D design software to design and document solutions for major course projects.

**Computer Science Essentials**
Grades 9 through 12 (1361) Credit: 1.0
This course exposes students to a diverse set of computational thinking concepts, fundamentals, and tools used by computer science professionals. Students begin by using visual, block-based programming languages before transitioning to text-based programming. Students will create apps and develop websites, and learn how to make computers work together to put their design into practice. They'll apply computational thinking practices, build their vocabulary, and collaborate just as computing professionals do to create products that address topics and problems important to them.

**AP Computer Science Principles**
Grades 11 and 12 (1356) Credit: 1.0
Prerequisite: Principles of Engineering or Computer Science Essentials or instructor approval
This is one of the specialization courses in the high school Project Lead the Way curriculum. Students are introduced to computational tools that foster creativity and develop computational thinking to solve open-ended, practical problems. Students learn and develop computer graphics, web-based applications, data mining applications using discrete mathematics and data visualization, simple Android applications, and computer models. This course has a curriculum that has been directed by the College Board and is designed to prepare the student to take the AP Examination scheduled in May. This course is extremely rigorous and will require summer work and extensive work outside of the classroom.

**Computer Integrated Manufacturing**
Grades 11 and 12 (1357) Credit: 1.0
Prerequisite: Principles of Engineering or instructor approval
Students are taught about manufacturing processes, product design, robotics, and automation. Students learn about the Principles of Manufacturing, how to program Computer Numerical Control (CNC) equipment and robotic arms, and how to design and program automated manufacturing systems.

**Computer Integrated Manufacturing A**
Grades 11 and 12 (1357) Credit: 0.5
Prerequisite: Principles of Engineering or instructor approval
In this half credit course students are taught about the principles of manufacturing and the manufacturing process. Students learn about the Principles of Manufacturing, how to program Computer Numerical Control (CNC) equipment and robotic arms, and how to design and program automated manufacturing systems.

**Computer Integrated Manufacturing B**
Grades 11 and 12 (1357) Credit: 0.5
Prerequisite: Principles of Engineering and Computer Integrated Manufacturing A
In this half credit course students are taught about the elements of automation and the integration of manufacturing. Students learn about the Principles of Manufacturing, how to program Computer Numerical Control (CNC) equipment and robotic arms, and how to design and program automated manufacturing systems.

**Engineering Design and Development**
Grade 12 (1358) Credit: 1.0
Prerequisite: Completion of: Civil Engineering and Architecture, Computer Science Principles or Computer Integrated Manufacturing with a grade of 80% or greater
This is a capstone class where the knowledge and skills students acquired throughout Project Lead the Way Engineering come together. Students identify an issue and then research, design, and test a solution for that issue, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to fully document the design.

**AP Computer Science A**
Grades 11 and 12 (1359) Credit: 1.0
Prerequisites: 90% Principles of Engineering; 90% Algebra II Honors; Teacher Recommendation
AP Computer Science is an introductory computer science course that emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development. It is meant to be equivalent to a first-semester college-level course in computer science. This course has a curriculum that has been directed by the College Board and is designed to prepare the student to take the AP Examination scheduled in May. This course is extremely rigorous and will require summer work and extensive work outside of the classroom

**Introduction to Drafting** (1362) Credit: 1.0
Prerequisite: Introduction to Engineering Technology, Introduction to Engineering Design, or concurrent enrollment at CTC.
This course will focus on allowing the student to develop drafting techniques and planning skills required for employment in technical industries like manufacturing, engineering technology, and construction/architecture. Students will use computer aided design and 3d printing to accurately design and model mechanical parts and both residential and industrial buildings. Models will be in electronic form (using CAD) and physical form (3d printed). Strong emphasis will be placed on accuracy of design, interpretation of working drawings (blueprints), and technical math skills directly applicable to industry.

# Social Studies

**World Geography**
Grade 7 (1407)
This course gives the student a balanced, broad view of the interaction of people with their physical and cultural environment. Students will explore humans' impact on the earth and how modern technology helps provide answers to questions about our ever-changing planet. In addition, students will investigate natural and man-made structures located all over the world and understand the reasons for their importance and their impacts on various cultures. Finally, the five themes of geography - location, place, human environment interaction, movement, and regions are emphasized in a regional approach to geography.

**Civics and Government**
Grade 8 (1408)
This course explores what it means to be an informed and participating citizen in a democratic society. Students will learn about the elements of democracy and the meaning of democratic citizenship on local, national, and global levels. In addition, students will learn about social change, examine decision-making and political processes, explore their own and others' beliefs and perspectives on civics questions, and learn how to think and act critically and creatively about public issues.

**American History I Honors**
Grade 9 (1481) Credit: 1.0
This course offers a comprehensive study of America from the colonial era, including European influences on the formation of the colonies, tensions with Great Britain leading to declaring independence, and the American Revolution, the writing of the Constitution, and American expansionism through the events that created tensions that led to the Civil War. Students will be challenged to study and explore in greater depth with the goal of developing higher-level cognitive skills, such as analysis, comparison, and contrast, through the use or more rigorous text, as well as classroom activities and in-depth, student-centered classroom discussion.

**American History II Honors**
Grade 10 (1485) Credit: 1.0
This course presents an historical overview of United States history from the Civil War to present-day America. Emphasis will be placed on the political, economic, social, and cultural development of our nation along with the military conflicts and international relations involving the United States and the world. Using historical documents, films and photographs, as well as classroom situations, students will gain an understanding of how the United States developed and grew after the Civil War period. This course will focus on in depth comparisons and contrasts of the world's political, economic, social, and cultural systems.

**Ancient World History Honors**
Grade 11 and 12 (1484) Credit: 1.0
Prerequisite: American History
The World History course offers students an opportunity to study ancient civilizations that have impacted the history of the world. Students will learn about the origins of man and will investigate how people formed great civilizations like those of Mesopotamia, Egypt, China, Greece, and Rome. Students will be studying such recurring themes of history as cultural interaction, the growth of government and political systems, development of religious and ethical systems, revolution, and the building of empires. Students will be encouraged to study all of these civilizations in greater depth with the goal of developing higher level thinking skills such as analysis, comparison, and contrast through the use of more varied on-line exercises, as well as classroom activities.

**Modern U.S. History and Contemporary Issues**
Grades 11 and 12 (1412) Credit: 1.0
This course covers the 1960's to the present day. Students will examine global trade and policies, economic comparisons of nations, conflicts, trends, cultural movements and important modern historical figures that have shaped our present status in the world today. Students will examine current topics such as world hunger, war, peace activism, environmental issues, and civil rights struggles that have impacted our world.

**American Government**
Grades 11 and 12 (1430) Credit 1.0
This course covers an in-depth curriculum of how the American Government works. Emphasis is placed on studying the U. S. Constitution, the three branches of government and the Bill of Rights. Through class debates, mock elections and trial simulations, students gain an understanding of how the American system of government functions today.

**AP United States Government and Politics**
Grades 11 and 12 (1491) Credit: 1.0
This course provides an analytical perspective on government and politics in the United States. At a minimum, students should already be familiar with the various institutions, groups, beliefs, and ideas that constitute United States political reality. This course explores the political theory and everyday practice that direct the daily operation of our government and shape our public policies. The express purpose of this course is to prepare students to take the AP Examination for U.S. Government and Politics. The course is for all intents and purposes taught on a college level and it requires a substantial amount of reading and preparations for every class. The objectives of this course go beyond a basic analysis of how our government works. Students will develop a critical understanding of the strengths and weaknesses of the American political system, as well as their rights and responsibilities as citizens.

**Psychology**
Grades 11 and 12 (1425) Credit: 1.0
Major topics covered include: introduction to psychology, focusing on major figures in the field; learning principles, focusing on stimulus and response, operant vs. classical conditioning, reinforcement and punishment, and behavior; personality theory, focusing on Freudian theories of id, ego and superego, collective unconscious, cognitive theory and humanism; memory and thought, concentrating on feature extraction, selective attention and memory theories, problem-solving and critical thinking; sensations and perception and perceptual influence; motivation and emotion, focusing on causation, notions of beauty, drive reduction, social motives, intrinsic vs. extrinsic motivation, pleasure principle, physiological theories of emotion and opponent process theory.

# World Languages

**Spanish I**
Grades 9 through 12 (1171) Credit: 1.0
In this rigorous introduction course, emphasis is placed on mastery of pronunciation and vocabulary. Present, simple future, and past-preterite tenses are introduced, along with the fundamentals of grammar, reading, and comprehension. Development of the ability to speak and understand is emphasized. Spanish-speaking culture and geography are also introduced.

**Spanish II**
Grades 10 through 12 (1172) Credit: 1.0
Prerequisite: Spanish I
This rigorous course reviews Spanish I tenses and introduces the past-imperfect and present perfect tense, the subjunctive mood, and other fine points of grammar not already covered. It further develops the student's ability to speak, read, write, and understand Spanish. The culture of Spanish-speaking countries is covered in more depth.

**Spanish III**
Grades 11 and 12 (1173) Credit: 1.0
Prerequisite: Spanish II
In this Pre-AP course, cultural background is pursued further in the development of individual skills through the six AP Spanish Language & Culture themes: Families and Communities, Science and Technology, Beauty and Aesthetics, Contemporary Life, Global Challenges, and Personal and Public Identities. Advanced grammar is reinforced through presentations and written communication. Students explore Spanish-speaking culture through literature, video presentations, holiday projects, and more.

**AP Spanish**
Grade 12 (1174) Credit: 1.0
Prerequisite: Spanish III
The FCR AP Spanish Language & Culture class allows students to further develop all areas essential to language learning through the six AP Spanish Language & Culture themes: Families and Communities, Science and Technology, Beauty and Aesthetics, Contemporary Life, Global Challenges, and Personal and Public Identities. Literature is read and interpreted much more closely, and various styles of assignments and assessments reinforce communication and expression in Spanish. Individual projects are emphasized and encouraged. This course has a curriculum that has been directed by the College Board and is designed to prepare the student to take the AP Examination scheduled in May. This course is extremely rigorous and will require summer work and extensive work outside of the classroom.

**French I** (1161) Credit: 1.0
Grades 7 through 12
In this rigorous course students are challenged to read, write, speak and listen to French. Over a span of 8 units students will be able to comprehend conversation with the themes of-Introducing and describing yourself and others, school, family and friends, restaurant/cafe, free time/hobbies, the home, vacation and holidays. The culture of France and francophile countries will be discussed according to the outlined themes.
Students will be able to communicate in the present, simple future and past tense.

**French II** (XXXX) Credit: 1.0
Grades 8 through 12

In this rigorous course students are challenged to read, write, speak and listen to French. Over a span of eight units students will be able to communicate and comprehend conversation with the following themes-food, health, technology, town/city, future/jobs, countryside and the arts.The culture of France and francophile countries will be discussed according to the outlined themes.  Students will be able to communicate in the conditional, future and subjunctive tenses.