

# **COURSE SELECTION GUIDE**



**KANE AREA HIGH  
SCHOOL  
2023-2024**

Dear KAHS Students and Families,

Preparing our students for their future is the purpose and goal of our curriculum, programs, and services. Simply taking classes for four years and graduating from high school is not the goal we have for our students. Our goal is much larger. We believe that high school is a means to an end. Readiness for careers and/or postsecondary school is our measuring stick. This course selection guide is evidence of our continued efforts to meet the needs of our students as they travel down the path to their future in this ever-changing and competitive world.

The faculty and administration have developed this course selection guide to help students and parents in the course selection process. The format is designed to guide students to select courses related to their interests, skills, and career goals. Enrolling in courses that are connected to their future plans will make learning more relevant and will motivate students to work harder.

Both students and parents are encouraged to review and discuss this guide thoroughly. In addition to the course offerings, please review closely the information regarding career planning, graduation requirements, and the course offerings. The course offerings provide a statement of course details, grade level offered, and possible prerequisite courses. It is our desire to provide clear guidelines, quality programs, and effective resources in an effort to prepare our students with a solid academic foundation and an understanding of future direction and life decisions.

This guide is a valuable resource for information for both students and parents. Planning for the future needs to happen now. Preparing for the future must happen every day. Kane Area High School is the pathway to connect educational opportunities to career planning for post-graduate success for all our students.

Sincerely,  
Kane Area High School Administration, Faculty, and Staff

Kane Area School District is an equal opportunity education institution and will not discriminate on the basis of race, color, national origin, sex and handicap in its activities, programs, or employment practices as required by Title VI, Title IX, and Section 504. For information regarding civil rights or grievance procedures, contact Mrs. Linda Lorenzo, Title IX Coordinator, Section 504 Coordinator, at Kane Area School District, 400 West Hemlock Avenue, Kane PA 16735 (814-837-9570). For information regarding services, activities and facilities that are accessible to and useable by handicapped persons, contact Mrs. Jeannine Kloss, Superintendent, at 814-837-9570.

# KASD Mission, Vision & District Values

## **Mission Statement**

The mission of the Kane Area School District is to provide all students with an engaging, safe and challenging learning environment that is shared and valued by all.

## **Vision Statement**

The Kane Area School District will inspire our students, all inclusive, to thrive and be productive members of their communities.

## **Shared Values**

- We believe all students deserve a quality education.
- We believe all students have the ability to learn.
- We believe in lifelong learning.
- We believe in effective communication and problem solving.
- We believe schools must promote healthy lifestyle choices and a safe environment.
- We believe education must prepare students to demonstrate 21st century skills in an ever changing global and technological society.
- We believe education must develop the whole person.
- We believe learning communities encompass the entire family, community and school.
- We believe the KASD Board of Directors, administration, faculty and staff should be positive role models.
- We believe education must engage, empower and inspire students to become good citizens with a strong work ethic.
- We believe everyone should put forth their best effort and everyone should be held accountable.
- We believe education should foster the development of self-respect and respect for others.

## Connecting Curriculum to Careers and Planning for the Future

### How is my education connected to a career?

Beginning in elementary school, the career planning process begins in third grade, continues through middle school, and culminates in high school with students developing career portfolios and utilizing this information to develop a career focus. These portfolios are readily available for student and parent review. An excellent tool utilized at the high school is the *Career Cruising* web-based application that is made available to all students and can be available for parents. The website link is [www.careercruising.com](http://www.careercruising.com). Please contact the guidance office for access. Students identify a career cluster of interest and then research what employment opportunities are listed in a chosen career cluster. Along with employment opportunities, there is a listing of educational requirements regarding course work in high school and after high school, whether this is for job training, technical school, or a college degree.

### What is a career cluster?

Each Career Cluster is a broad grouping of careers that list characteristics of specific careers and requirements of education and training and competencies necessary for individuals who want to pursue a specific career. A chosen career cluster focuses a student's academic and vocational courses toward preparing for a specific career pathway. There are sixteen career clusters which are found in the *Career Cruising* application with listings of specific careers in each cluster. The clusters are as follows:

- Agricultural, Food, & Natural resources
- Architecture & Construction
- Arts, A/V Technology & Communication
- Business Management & Administration
- Education & Training
- Finance
- Government
- Health Science
- Hospitality & Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections & Security
- Manufacturing
- Marketing
- Science, Technology, Engineering & Math
- Transportation, Distribution & Logistics

### Why should I choose a career cluster?

- To help focus on a career area that matches interests in high school.
- To help set goals and discover classes necessary to achieve those goals.
- To create career awareness and encourage planning for postsecondary education and opportunities.
- To provide knowledge that relates your high school education to the world after graduation.

## How do I choose a career pathway?

- Students will research various career fields in middle school through their Career Education course. Career focus development will continue with guidance from the high school counselor as students will participate in activities such as interest inventories, portfolio development, ASVAB testing, and enrollment in a career exploration class.
- Counselors, parents, and teachers can assist with making career choices.
- Students can complete the self-assessment guide through the *Career Cruising* application in high school.

## How will my academic studies change?

Beginning with the graduating Class of 2023, the career focus concept will be instituted. Students will choose courses based on an identified career cluster. There will no longer be an honors, academic, or vocational track for graduation. Students will take all required core courses for graduation requirements listed below under **Graduation Requirements**. Students will have the opportunity to take a variety of electives, as well as vocational, honors, AP, and dual enrollment courses. Also, students have the opportunity to attend the Career Technical Center (CTC) in Port Allegheny every other day. Students will take core courses at KAHS on A days and attend CTC on B days. Course work is designed to prepare students for a selected career pathway.

## GENERAL INFORMATION

### School Organization

A school counselor is available to assist students with scheduling and transitioning for each grade level. The counselor meets with students collectively at each grade level to review courses and credits and to provide feedback to students on the scheduling process. Along with student grade level meetings, there are parent meetings for each grade level to assist parents in understanding how the scheduling process works and to answer any questions parents might have about transitioning from one grade to the next. Parents and students are encouraged to contact their counselor and principal for assistance.

### High School Block Schedule

The high school day is divided into five class periods. Periods one through four are 80 minutes long and period five is 40 minutes long. We have an alternating A/B schedule (A = red day & B = blue day) for periods one through four. Period five meets daily.

### Course Credits

Courses are either 2.0 credits, 1.0 credit, 0.5 credit, or 0.25 credits. Course credits are designated next to courses in the course listings found later in this guide. One credit courses meet every other day for the year, while 0.5 credit courses meet every other day for a semester. The exception is a class that meets during fifth period; it will meet every day.

### Graduation requirements

All students must successfully complete thirty (30) credits (grades 9-12) to include the following:

- Four credits - English I - IV
- Four credits - mathematics (to include algebra and geometry)
- Four credits - science (to include earth science and biology)
- Four credits - citizenship (world culture, United States History II, United States History III, and senior social studies)
- Two credits - physical education

- One-half credit - health
- Two credits - foreign language (Intro. to Foreign Cultures, Spanish, or German)
- One credit – information technology
- Eight and one-half credits of electives
- There will no longer be three courses of study beginning with the graduating Class of 2023.
- Each student must also complete a minimum of eight hours of volunteer service each year, 9<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grade years, must complete one job shadow during the 11<sup>th</sup> grade.
- While enrolled in the Career and Technical Program at Port Allegany, students must pass all the courses assigned to them in addition to the graduation requirements. **CTC students will need to earn 28 credits based on their program.** The CTC classes can be substituted as electives.
- Career and Technical Program students must complete two (2) credits of a combination of physical education and health.

## Keystone Exams and Graduation Requirements

All students must take the Keystone exams in Algebra I, Biology, and English literature at the end of the corresponding course and score proficient. Students who are not proficient on their first attempt will be offered supplemental instruction and will be required to re-take the corresponding Keystone exam. [If the Keystone requirement is not met, then other Pathways will have to be followed in order to meet graduation requirements.](#)

**Keystone Exams are given in the spring of each school year to students enrolled in the following:**

Algebra I (Comprehensive Algebra, Algebra I, Algebra IB, Math 10)

English Literature (English II, Honors English II, English 10)

Biology (Biology, Honors biology)

## Dual Enrollment Course

The following courses listed below are currently offered as dual enrollment opportunities with the University of Pittsburgh at Bradford. Students who enroll in these classes are able to receive college credit if they earn a final grade of a C or better and pay a fee for the class to be counted as college credit. Parent will be notified of any course that is offered as dual enrollment. Currently, some sophomores who meet requirements, juniors and seniors are eligible for dual enrollment courses. Sophomores can be eligible for DE if they have previously passed a Keystone Assessment as per UPB.

- Honors Psychology
- Advanced Biology
- Honors Chemistry
- Pre-Calculus
- Calculus
- Physics
- Literature and Interpretations
- English Composition I
- Principles of Management

## AP Courses

The following courses below are currently offered as Advanced Placement (AP) courses. Students who are interested in enrolling in these classes must pay the required AP exam fee of \$89.00 to receive credit for the course as completion of an AP exam is required. College credit is usually awarded for any AP exam score of 3,

however this is not always the case at all colleges and universities. The AP exam score is not the score or grade assigned for class completion; the grade for the class is dependent on performance of the student in the class. AP courses and their offerings are dependent on student enrollment in the class. They may or may not be offered if enrollment is low.

- AP Calculus
- AP Environmental Science
- AP Chemistry

### **Honors Courses**

Honors classes are available for the following courses. Aside from the fact that honors courses differ in content and material, honors courses provide students with a fuller understanding and a further opportunity to analyze and synthesize beyond what regular courses do. The honors courses allow for deeper interactive discussions that allow students to express their thoughts about course content, making them, then, feel more accomplished in what they are doing. Honors courses and their offerings are dependent on student enrollment in the class. **They may or may not be offered if enrollment is low.**

- Plane Geometry
- Algebra II
- English I, II, III, & IV
- US History II & III
- Biology
- Chemistry (honors is also dual enrollment)
- Psychology (honors is also dual enrollment)

### **Weighted Courses**

The following courses are weighted courses. These courses have a grade point average (GPA) based on a five-point scale (A – 5, B – 4, C – 3, D – 2, F – 0) due to the increase rigor of the course. This higher GPA will increase the overall GPA of a student on his or her transcript. These courses and their offerings are dependent on student enrollment in the class. They may or may not be offered if enrollment is low.

- All AP courses
- All DE courses
- Advanced Biology
- Organic/Biochemistry
- Calculus (also dual enrollment)
- Foreign language IV and V

### **Prerequisites**

Certain courses will have prerequisites due to the sequential nature of the course content. Students should read all course descriptions and work with their counselor to make sure that prerequisites are met.

### **Course Selection**

The school counselor will meet with all the students by grade level to discuss scheduling for the next school year during the third term. The counselor will provide students with a course selection guide and a grade level scheduling sheet. The counselor will review course offerings and how scheduling sheets are to be completed. He will answer questions for students to make sure that they understand process for scheduling courses. Students will be directed to take scheduling documents home and discuss and review with their parents or guardians. Parent

scheduling meetings will be held in the evening shortly after student meetings and parents will be presented with scheduling information and given the opportunity to ask questions and discuss scheduling for their children

Students will select courses and enter these courses into the student portal. All students must schedule a full roster in order to meet graduation requirements. Courses should be selected based on individual needs and interests. Development of schedules for approximately 400 students and 30 teachers requires careful planning, budgeting and allocation of resources. Some classes may not be offered due to insufficient enrollment, and other classes may be capped if they are too large for the resources available. Students should select alternative elective courses for these situations. Students and parents can contact the counselor or principal if they have any questions. Meetings can be set up to facilitate any needs regarding scheduling. The final date for students to submit course requests will be announced to students prior to the fourth term. The last step in the scheduling process will be completed when students enter their schedules into the student scheduling system. Before the end of school year, any changes will be school initiated as a result of a scheduling conflict or insufficient class numbers.

Tentative schedules will be available online to students by August 2023.

### **Schedule Changes/Course Commitments**

Students will not be permitted to drop courses they have requested. However, during the first week of each semester, students will be permitted to request course changes if the request meets one of the following criteria:

- **ACADEMIC MISPLACEMENT** - determined by previous subject grades, related standardized test scores, teacher information, evidence of sufficient student effort and administrative approval
- **SCHEDULING ERROR** - missing graduation requirements, missing a course prerequisite
- **CURRICULUM PROGRAM CHANGE** - dropping a less difficult course for a more difficult course as determined by assigned course weight
- **SUMMER CREDIT RECOVERY** - changes resulting from successful completion of credit recovery courses.
- **CHANGE IN CAREER FOCUS**- a student may want to take a different course that is more in line with and supports a new career focus

**PLEASE NOTE: Meeting any of these criteria does not guarantee a schedule change but allows a student to be eligible for consideration for a change. All class changes are subject to final approval by the appropriate administrator. There are times when the student's course change request cannot be met due to full classes, unavailability of classes at appropriate times necessary to meet the student's needs or other similar circumstances.**

**A course which is dropped and does not meet the above criteria will result in a failure for the course grade. This becomes part of the student's permanent record.**



## **Potential Sequences of Math Classes at the High School**

### **COURSE OF STUDY 1:**

1. Algebra 1
2. Geometry
3. Algebra 2
4. Pre-Calculus
5. Calculus or AP Calculus

### **COURSE OF STUDY 2:**

1. Comprehensive Algebra 1 or Algebra 1
2. Algebra 1B
3. Algebra 2
4. Geometry
5. Business Math, Pre-Calculus or Accounting 2

### **COURSE OF STUDY 3:**

1. Comprehensive Algebra 1 or Algebra 1
2. Algebra 1B
3. Geometry
4. Business Math or Accounting 2 or Algebra 2

## **Recommended Sequence of SCIENCE Classes at the High School**

### **COURSE OF STUDY 1:**

1. Earth Science
2. Biology (Honors recommended)
3. Chemistry
4. Physics

### **COURSE OF STUDY 2:**

1. Earth Science
2. Biology
3. Physical Science I
4. Chemistry

### **COURSE OF STUDY 3:**

1. Earth Science
2. Biology
3. Physical Science I
4. Physical Science II
5. Science Technology and Society

(C) Denotes content level course, which implies a specific body of knowledge to be learned with considerable homework assigned.

(S) Denotes skill level course, which implies the development of a skill in a lab-type setting with little or no homework assigned.

(W) Denotes weighted course, which means the course carries an extra weight when class rankings are assigned and because of the advanced degree of difficulty with this class, students can expect extensive homework and assignment completion.

## ART

**Advanced Crafts (S)** 10, 11 or 12 .5 credit  
This course deals with ceramics (hand built and thrown pottery projects), printmaking, sculpture and 3-D design and weaving. Students are expected to be self-motivated. Projects are complex and a high level of craftsmanship is expected. Introduction to Crafts is a prerequisite.

**Advanced Painting (S)** 10, 11 or 12 .5 credit  
This course offers advanced instruction in both acrylics and oil painting. Paintings include still life, landscape, master copy and painting(s) of the student's choice. Students either need to have taken Introduction to Art or have some drawing skills and should be self-directed. Introduction to Painting is a prerequisite.

**Art and the Computer (S)** 11 or 12 .5 credit  
This course is designed to provide students with a series of increasingly complex projects which utilize both principles of art and the basics of graphic design. All projects are completed using Photoshop. Students need to be highly motivated and self-directed.

**Introduction to Art (S)** 9, 10, 11 or 12 .5 credit  
This course focuses on basic drawing skills. Drawing techniques using various media (charcoal, pencil, ink wash, pastels, etc.), composition, the elements of art and principles of design and one, two and three-point perspective are covered.

**Introduction to Crafts (S)** 9, 10, 11 or 12 .5 credit  
This course teaches the basics of ceramics (hand built and thrown pottery projects), printmaking, sculpture and 3-D design, and weaving.

**Introduction to Painting (S)** 9, 10, 11 or 12 .5 credit  
This course offers instruction in the basics of color theory and painting techniques. Projects are done in both acrylics and watercolor.

**Introduction to Stained Glass (S)** 11 or 12 .5 credit  
This course teaches the process of stained glass through a series of increasingly more difficult projects. Elements of design and color theory are explored through the medium of glass.

**Studio Art (S)**

11 or 12

½ credit or 1 credit

This course may be scheduled as a semester (½ credit) or full year (1 credit) course. It may be scheduled to take the place of an advanced level course which cannot be scheduled due to a conflict or which is not being offered or may allow a student who has completed advanced level courses to more deeply focus on a particular medium. The focus of the course and required course work is determined by the student and instructor. Admission to the course is restricted to students who have exhibited above average art skills.

**COMPUTER****Information Technology (S)**

9

1 credit

This course reviews touch typing techniques on the keyboard and the correct use of basic computer features. Some emphasis is placed on the development of speed and accuracy. This course covers the basics of appropriate and effective internet use, word processing, spreadsheets, presentation, desktop publishing, and other multi-media applications. Students will use applications in the creation and formatting of business and personal documents. Information technology is required for all students in grade nine. The intent of the course is to give students keyboarding and computer skills that will serve them throughout their school years, in their personal lives, and in their careers.

**ENGLISH****English I (C) \***

9

1 credit

English I is a basic language course with emphasis placed upon grammar, mechanics and composition. The structures of the short story and the novel are studied, as well as the techniques of poetry.

**English II (C) \***

10

1 credit

English II covers a wide field of literature including short story, poetry, biography and autobiography, drama and the novel. Instruction in grammar is provided along with the further study and practice of basic techniques in composition and public speaking. The English Keystone exam is administered to all students at the end of the course.

**English III (C) \***

11

1 credit

English III centers on American literature. The course is taught in chronological order from the early settlers to contemporary writers. Emphasis is on development and attitudinal changes in the history of the United States as seen through literature. Other areas of concentration include grammar, composition, oral expression, and an introduction to the research paper.

**English IV (C) \***

12

1 credit

English IV is planned as a course, providing a review in basic essentials of language, literature, composition and speaking skills covered in the previous years. Emphasis is on a firm background in English literature, the writing of essays, criticisms and the research paper. Formal correction of grammar is done where weaknesses are detected or where knowledge of grammatical structure is lacking. Also reviewed are the various literary terms and techniques taught during the past three years. New literary terms and techniques needed for advancement to institutions of higher learning are introduced.

\* Honors classes will be offered in English I-IV for those students interested in and capable of pursuing a more challenging version of the course. Teacher signature for approval needed.

**Literature and Interpretation (CW)** 11 & 12 .5 CREDIT

This course will examine the ways in which meaning is created in both literary and non-literary texts and introduce you to some of the methods of literary interpretation. We will examine common literary devices and literary concepts like genre, narrative, character, and figurative language and use these concepts to consider the interaction among the reader, the writer, and the text itself and between different texts in the act of interpretation. Must be taken with English Composition 1 to receive 1-year English requirement and dual enrollment credit.

**Journalism (C)** 10, 11 or 12 .5 credit

This course will acquaint students with the type of effort demanded of journalists. The student studies and participates in the construction of the various types of articles required by the media and learns to recognize newsworthy events and produce them effectively. Journalistic writing emphasizes the polishing and cutting of the product. This course has much to offer the student who is contemplating a journalistic career. The journalism class writes, and edits articles, creates a layout, and produces the school newspaper.

**Man and Myth (C)** 10, 11 or 12 .5 credit

This course is based on Greek mythology and man's role in society today. It covers the classic Greek myths, going into details of Greek gods, customs and society. The course is primarily for those students who have an interest in learning about these past times.

**Speech (C)** 9, 10, 11 or 12 .5 credit

Opportunities are provided for students to develop skills in normal speaking situations. Students planning to continue their education beyond high school will find the course helpful in preparation for participation in class discussion. Students will be expected to give speeches that inform, demonstrate, persuade, inspire, and entertain.

**Theatre Arts (C)** 11 or 12 1 credit

This course emphasizes the individual actor's interpretation of a part, his ability to communicate his character, and the techniques of voice projection and body movement for the stage. The student will be expected to prepare presentations of his own and several in concert with the other class members. The ability to memorize lines is a prerequisite for this course.

**Yearbook (C)** 11 or 12 1 credit

This course is designed to provide students the opportunity to plan and develop the school's yearbook. Emphasis will be on basic page design, theme, photography, and copy writing. Students will be expected to take photographs and produce actual copy and pages for the yearbook. Students must meet with and have teacher recommendation in order to take this course.

**Creative Writing** 9,10,11,12 .5 credit

This course provides students the opportunity to focus on expressive writing in many different forms. Students will explore works by established authors and analyze the effective writing techniques used. Students will use learned techniques to create original forms of descriptive writing, poetry, drama, and fiction independently and collaboratively

## FOREIGN LANGUAGE

**Introduction to Foreign Cultures (C)\***                      9, 10, 11, or 12                      1 credit

The major aim of this course is to inform students about German, Spanish, French, and Russian culture. The students will learn facts about each country's geography, history, language, and way of life.

\*This class should not be taken if you have already successfully completed another foreign language class.

**German I (C)**    9, 10, 11 or 12    1 credit

The major aims of German I are the four objectives that make up language study: understanding, speaking, reading, and writing simple German. Understanding and speaking receive the major emphasis because these skills are the keys to the others, reading and writing. Directed conversations, dictation, exercises, and translations are used to increase proficiency.

**German II (C)**    10, 11 or 12    1 credit

This course continues the study of German with major emphasis on reading and writing. Understanding and speaking are still emphasized to increase the student's proficiency in the use of the language. Selective short stories are read.

**German III (C) \***    11 or 12    1 credit

Reading, writing and grammar are the basic skills emphasized in this course. German short stories are read. Writing usually develops as a result of the reading and may take the form of answering questions, writing summaries, dialogues, or descriptions.

**German IV (CW) \***    12    1 credit

German IV places emphasis on literature. It is a continuation of previous work on listening, speaking, reading, and writing skills.

\* Teacher signature for approval needed.

**Spanish I (C)**    9, 10, 11 or 12    1 credit

Spanish I is an introductory course stressing understanding, speaking, reading, and writing of the Spanish language. The course is built around functional expressions, vocabulary, and grammatical structures that would be needed to communicate at very basic levels. To promote cultural sensitivity, it also has an emphasis on the culture of Hispanic Countries.

**Spanish II (C)**    9, 10, 11 or 12    1 credit

Spanish II is a continuation of the basic course begun in Spanish I.

**Spanish III (C) \***    10, 11 or 12    1 credit

Spanish III is a continuation of previous work done in Spanish 1 & II. The emphasis of this course focuses cultural studies, specialized vocabulary, grammar, and translation/pronunciation skills.

**Spanish IV (CW)\*** 11 or 12 1 credit

Spanish IV is an advanced course for those students who have a sincere interest in the Spanish language. It is a continuation of previous work done in Spanish I, II, & III. The emphasis of this course focuses on reading, translation, and listening skills, an in-depth study of grammar, and cultural studies.

**Spanish V (CW)\*** 12 1 credit

Spanish V is an advanced course for the serious Spanish student. It is a continuation of previous work done in Spanish I, II, III, and IV. The emphasis of this course focuses on advanced reading, writing, listening, and speaking skills along with cultural studies.

\* Teacher signature for approval needed.

### **MATHEMATICS**

**Algebra I (C)** 9 1 credit

Algebra I includes operations with signed numbers, statement problems, linear and quadratic equations, roots, powers, graphics, polynomials, and number systems. It is open to students who have successfully completed general mathematics and Pre-Algebra. Students have to take Algebra I prior to Plane Geometry. The Algebra I Keystone exam is administered to all students at the end of the course.

**Comprehensive Algebra I (C)** 9 2 credits

This 2-credit course meets every day, all year, and is designed to allow for additional time and opportunities to master Algebra I concepts in preparation for the Keystone Algebra I exam. After a review of Pre-Algebra concepts, the entire Algebra I curriculum will be covered. Algebra I includes operations with signed numbers, statement problems, linear and quadratic equations, roots, powers, graphics, polynomials, and number systems. This course is recommended for those students who completed Pre-Algebra but would benefit from additional instructional time to be successful in Algebra I. This course may not be taken by students who have successfully completed Algebra I. This class fulfills the Algebra I requirement for graduation. The Algebra I Keystone exam is administered to all students at the end of the course.

**Algebra IB(C)** 9, 10, 11 or 12 1 credit

This course is recommended for those students who completed Algebra I but need additional instruction before progressing to the academic Algebra II course. Algebra I is a prerequisite for this course. This class **may not** be taken by students who have successfully completed Algebra II. The Algebra I Keystone exam is administered to all students **who have not yet achieved proficient or advanced** at the end of the course.

**Plane Geometry (C) \*** 9, 10, 11 or 12 1 credit

This course provides students the opportunity to use deductive reasoning in working with triangles, quadrilaterals, regular polygons, circles and geometric solids. Algebra I is a prerequisite for this course.

\* Honors will be offered in Plane Geometry for those students interested in and capable of pursuing a more challenging version of the course. Teacher signature for approval needed.

**Practical Geometry (C)** 11 or 12 1 credit

Practical Geometry is an informal approach to topics found in our traditional plane geometry course. Emphasis will be placed on using geometry to solve everyday problems related to surface areas, volumes, ratios and proportions, special right triangle properties, as well as an informal look at the properties of geometric shapes and figures. Theorems from geometry will be used without the aid of proofs. Algebra I is a prerequisite for this course. This class **may not** be taken by students who have successfully completed Plane Geometry.

**Algebra II (C)\*** 10, 11 or 12 1 credit

This course is designed for academic minded students who have completed Algebra I with a final grade of A or B. For students who had a final grade of C or D in Algebra I, Algebra IB is recommended before taking Algebra II. It is open to all high school students but is recommended for those in grades ten through twelve. Students will use terminology, notation, concepts, skills, and applications and the principles of algebra to solve increasingly complicated algebra problems.

\* Honors will be offered in Algebra II for those students interested in and capable of pursuing a more challenging version of the course. Teacher signature for approval needed.

**Business Mathematics (C)** 11 or 12 1 credit

This course is designed to develop skills in the four basic mathematics operations in a business-related environment. Problems address such issues as checkbook records, purchasing, wages and deductions, borrowing and saving money, and home ownership. Algebra I and Practical or Plane Geometry are prerequisites for this course.

**Pre-calculus (CW)** 10, 11 or 12 1 credit

This course is designed to prepare students for calculus and is recommended for anyone planning any type of science-related career. The course introduces students to concepts used in other types of mathematics such as linear and abstract algebras. Students should have successfully completed Plane Geometry and Algebra II before scheduling this course. It is recommended that students have a grade of 80% or above in Algebra II.

**Calculus (CW)** 11 or 12 1 credit

This course is designed for students who have successfully completed the mathematics curriculum sequence through Pre-calculus. It is offered with two goals in mind. The first goal is to use Calculus as a review of the prerequisite courses' objectives and to demonstrate for the first time how they are all interrelated. The second goal is to introduce the basic concepts of Calculus, the limit, differentiation and integration in a precise manner and to clearly define and demonstrate some of its applications.

**Advanced Placement Calculus B/C (CW)** 11 or 12 2 credits

The course will include topics in calculus with focus on the Calculus BC outline established by The College Board. The students must have an excellent background in algebra, geometry, trigonometry and analytical geometry. The students need to have teacher recommendations and agree to purchase and take the AP exam. It is recommended that students interested in taking this course have a grade of B or higher in Pre-calculus.

This course allows students the opportunity to earn up to six college credits or college placement while in high school. The amount of the credit depends on the score on the AP Exam and university the student will attend.

**Statistics (C)** 11 or 12 1 credit

The science of statistics is the study of collections of numbers in order to (1) describe them accurately and concisely and (2) draw valid inferences from them. This course is designed to show students how statistics connect to their lives and how the simpler statistical methods should be used properly. The major emphasis is an understanding of the types of statistics that appear frequently in the media and on learning how to interpret them. This course will give college-bound students the necessary fundamental background in descriptive and inferential statistics. Successful completion of Algebra II is required to take this course. This class is extremely beneficial for students looking to pursue a science or math-related field as well as business or nursing.

**MUSIC**

**Choir (S)** 9, 10, 11 or 12 1 credit

Any student who wishes to improve vocal and choral skills may participate in Choir. The group performs in two concerts each year.

**Music Appreciation (C)** 10, 11 or 12 1 credit

This course is a survey of music in which emphasis is placed on becoming familiar with many styles of music. The course content will include the elements of music and composers from Bach and Beethoven to Copeland and Bernstein. A special unit will be devoted to American music including jazz and Broadway shows. Course work includes listening to music, discussion, an oral presentation, and a research paper.

**Band (S)** 9, 10, 11 or 12 1 credit

Brass, woodwind and percussion players will gain experience in playing their instruments, will explore a part of the literature or concert band, will perform in public, and will increase knowledge of basic musicianship.

**Orchestra (S)** 9, 10, 11 or 12 1 credit

All string players in the middle and high schools, selected brass, woodwind and percussion players play literature for orchestra. Students interested in Band and/or Orchestra have the following choices: Band, Orchestra, or Orchestra/Band

**PHYSICAL EDUCATION**

**Physical Education (S)** 9/10 and 11/12 .5 credit

Fitness evaluation and a conditioning unit are conducted at each grade level. Lifetime and team sports are presented at the beginning and advanced levels during the four high school years.

**Health (C)** 10 or 11 .5 credit

Health includes mental health, human growth and development, human sexuality, alcohol, drug and substance abuse, nutrition, and consumer education.



**Advanced Aquatics (S)** 10, 11 or 12 .5 credit

Lifeguarding certification can be earned following American Red Cross guidelines. Emphasis is on lifeguarding skills, CPR for the Professional Rescuer, and standard first aid and safety. Students are required to pass a swimming test before taking this course. This course counts for meeting your physical education credit requirements. **Students must be at least 15 years old to earn their American Red Cross Lifeguarding Certification**

**Personal Fitness( C)** 9, 10, 11 or 12 .5 credit

The personal fitness curriculum is designed to improve the many aspects of wellness including, cardiovascular fitness, muscular strength, muscular endurance, flexibility, mental health, nutrition, and personal safety. During the course, students will learn how to establish, maintain, and improve their individual personal fitness and general wellness goals that will last a lifetime.

**Emergency Life Saving Class (S)** 10,11,12 .5 credit

Students will work to acquire First Aid, CPR, AED, Life Threatening Bleeding, and Tourniquet Certifications

This course is offered to students who wish to pursue the lifesaving requirements of First Aid, CPR, AED, Life Threatening Bleeding and Tourniquet Certifications prepared by the American Red Cross. Students will be taught the skills and knowledge necessary to recognize and respond to emergencies that pertain to each of the 4 certifications as well as various techniques to prevent accidents that relate to these lifesaving skills. If the students pass all of the requirements for each certification, then they will have the opportunity to earn an official ARC Certificate in each of the successfully completed components. Emergency Life Saving is a semester course that meets for a minimum of eighty minutes two or three times a week and is worth one-half credit. In order to qualify a student must be at least fifteen (15) years old and satisfy the following skills and requirements.

**Aquatic Fundamentals(C)** 9,10,11 or 12 .5 credit

This course is designed to provide the student with an overview of a variety of aquatic activities. Consideration is given to basic water safety, boater safety, lifelong leisure water activities, general health tips for indoor and outdoor water activities, heat and cold related emergencies, general stroke techniques, starts and turns, skin diving, elementary non-swimming rescue techniques, diving progressions from the deck, synchronized swimming, water polo, personal fitness, and aquatic games. This is a Theory and Technique Course

## **SCIENCE**

**Earth & Environmental Science (C)** 9 1 credit

This course emphasizes the earth's structure, movement and basic function. The course will teach the basic fundamental function of the ecosystem and various environmental components in nature. Students learn the relationship of science to their lives using science process skills, problem solving, and inductive/deductive reasoning.

**Biology (C)** 9 or 10 1 credit

This course is a study of living organisms and their environment. Emphasis is placed on science process skills, problem solving, and how Biology affects the student's daily lives. NOTE: Students selecting Honors Biology will be expected to expand their knowledge and understanding of content as well as their processing skills beyond the expectations for students in regular Biology classes. The Biology Keystone exam is administered to all students at the end of the course.

**Physical Science I (C)** 10, 11 or 12 1 credit

This course is an introduction to Chemistry. An emphasis is placed on science process skills, inductive and deductive reasoning, problem solving, and how science affects the daily life of all students. NOTE: This course may not be selected if the student has already taken and passed Chemistry.

**Chemistry I (C)** 10, 11 or 12 1 credit

Chemistry is an academic science that deals with the composition, structure, and properties of substances. There is an emphasis on problem solving throughout the class, with common usage of basic math and Algebra 1 skills. Students perform weekly labs and write corresponding lab reports to supplement class work. Before taking chemistry, students are required to have completed Algebra 1 with at least a C or will be required to take Physical Science I. An honors class will be offered in Chemistry for those students interested in and capable of pursuing a more challenging version of the course.

**Physical Science II (C)** 10, 11 or 12 1 credit

This course is an introduction to Physics. Emphasis is placed on science process skills, problem solving, inductive and deductive reasoning, and the daily relationship of science to the lives of every student. NOTE: This course may not be selected if the student has already taken and passed Physics.

**Physics (C)** 11 or 12 1 credit

Physics is the study of matter and energy and the relationships between the two. The course covers force, motion, work, power, heat, light, sound and electricity. It is strongly recommended that students have completed Pre-Calculus or are scheduled to take it concurrently.

**Science, Technology and Society (C)** 10, 11 or 12 1 credit

The focus of this course is how science and technology affect people in their everyday lives. Current events will be a major draw for topics discussed, with various magazines and newspapers used as the "book." Topics to be addressed may include, but are not limited to, ethical dilemmas of modern technology, careers available, society's rights and responsibilities in an advancing world.

**Pennsylvania Wildlife Habitat (C)** 9, 10, 11 or 12 .5 credit

This is an elective course that focuses on the ecology of Pennsylvania mammals, birds, fish, reptiles and amphibians. The course will also examine the benefits of wildlife conservation and risks of invasive species to the Pennsylvania economy. Course highlights will include field-based projects and possible field trips to local facilities such as Elk Visitors Center, PA Game Commission bear check station, PA Fish and Boat Commission trout nursery, Sinnemahoning State Park Wildlife Center.

**Organic/Biochemistry (CW)** 11 or 12 1 credit

This is a course about how carbon is the element of life. The structure and properties of carbon compounds will be discussed and how they relate to living things. Primary focus of the course will be the

"language" of organic chemistry, reactions of carbon compounds, and principal categories of organic compounds in biology. The categories of compounds discussed will be fats, proteins, and carbohydrates. These courses are required of all students entering medical fields in college. Prerequisite: Chemistry I

**Advanced Biology (CW)** 11 or 12 1 credit

Subject material will be presented at a higher level, addressing high-achieving students. Areas of focus will include bacteria, plant physiology, fungus, mollusks, crustaceans, reptiles and amphibians. The course utilizes an Advanced Placement and college-level textbook so the pace and instructional level of the course is very rapid and demanding. Course highlights include field studies as well as dissection and physiology studies of clams, earthworms, crayfish, frogs and fetal pigs. Prerequisites include earning at least a "C" average in Biology and Chemistry.

**Advanced Placement Environmental Science (CW)** 10, 11, 12 1 credit

AP Environmental Science is an advanced study of the environment and global and local environmental concerns. This course is equivalent to a one semester college environmental science course. Prerequisites are Earth Science, Biology or Honors Biology and Chemistry or Honors Chemistry. The student needs to have teacher recommendation, complete summer assignments, and agree to purchase and take the AP exam.

This course allows students, who successfully pass the AP exam, the opportunity to earn up to four college credits. The amount of the credit depends on the university the student will attend.

**Advanced Placement Chemistry (CW)** 11 or 12 2 credits

This is an accelerated, advanced chemistry course equivalent to a full year college chemistry course. Recommended prerequisites are Algebra I, Algebra II, and Chemistry I. The student needs to have teacher recommendation, do summer reading assignments, and agree to purchase and take the AP exam.

This course allows students, who successfully pass the AP exam, the opportunity to earn up to eight college credits. The amount of the credit depends on the university the student will attend.

## **SOCIAL STUDIES**

**World Culture (C)** 9 1 credit

This is a concentrated cultural and geographical study of various sections of the non-western world including Africa, Soviet Union, China, Japan, Middle East, and India.

**United States History II (C) \*\*** 10 1 credit

United States History II is a chronological study of America's involvement in domestic and foreign affairs from 1865 to 1959. Trends, such as westward expansion, sectionalism, growth of government and business, and imperialism are discussed. The social and cultural history of the United States is also covered.

**United States History III (C) \*\*** 11 1 credit

This is a topically approached analysis of American history from 1946 to the present. Focus is given to the economic, social, historical, and cultural milestone that influences our recent history.

\*\* Honors classes will be offered in United States History II and United States History III for those students interested in and capable of pursuing a more challenging version of the course. Teacher signature for approval needed. Teacher signature for approval needed.

**Senior Social Studies (C)** 12 1 credit  
Units in economics, government, Pennsylvania school system, sociology, Pennsylvania history, and career possibilities are presented in this course.

**European History** 10,11,12 1 credit  
This course is designed to give students a background and perspective on the history, cultures, and influences that European civilization has had upon the world from Ancient Greece through the Modern Age.

**Philosophy (C)** 10, 11 or 12 1 credit  
This is an advanced elective designed for the student who desires to dig deeply into the concepts of freedom, ethics, morality, and justice. Through the interpretive reading of four books, extensive writing of papers, class discussions, and film analysis, students will come to a deeper analysis of themselves and their world.

**Honors Psychology (CW)** 11 or 12 1 credit  
The study of behavior, this course includes the study of normal and abnormal personality, learning, thinking, child psychology, marriage, adolescent psychology, parapsychology, personality, perception, and humanistic psychology. This course will be weighted and offered as Dual Enrollment through the University of Pittsburgh at Bradford. The course will follow an introductory college level curriculum and follow a college level pace. Emphasis will be placed on college writing, reading, and academic responsibility.

**History of Sport in Modern America (C)** 9, 10, 11, or 12 .5 credit  
This class will take a look at the history of American sports from the late 1800s through the present. Students will examine the growth and decline of sports such as boxing, baseball, basketball, and football in the United States over that time period. Students will also learn a greater appreciation for the issues that have affected sports such as politics, gender, discrimination, race bias and class economics. Students will also analyze the impact of economics on American sport at the high school, college, and professional levels as well as issues threatening sports in present day America.

## **SPECIALIZED CAREER COURSES**

### **BUSINESS**

**Accounting I (C)** 10, 11 or 12 1 credit  
The purpose of this course is to learn how to keep financial records for a small business and for personal use. Computerized accounting is introduced.

**Accounting II (C)** 11 or 12 1 credit

This course reinforces and builds on theory and procedures learned in Accounting I with an emphasis on accounting software. Successful completion can lead to an entry-level accounting position. A "C" average in Accounting I is a prerequisite. This course can be counted as one of the required math credits to meet graduation requirements.

**Marketing and Multimedia Computer Applications (S)** 10, 11, 12 .5 credit

This course offers students a comprehensive overview of marketing principles and practices. This course will include introductions to sales, advertising, marketing research, and entrepreneurship. The course also offers students the opportunity to develop skills related to multimedia projects using photo, video, audio, graphics, and design. This course will include introductions to web design and digital moviemaking and editing. This course is available to tenth through twelfth grade students. Successful completion of Information Technology is a prerequisite.

**Business Ethics and Law (C)** 11 or 12 1 credit

This course will develop a basic comprehension to the law as it relates to the students currently and implications of the law in their future personal and business lives. It will include an overview of the court system at the local, state, and federal level with regard to business regulations. Successful completion of Information Technology is a prerequisite.

**Introduction to Business (C)** 9, 10, 11, 12 .5 credit

This course offers an introduction to business and career classes and was created as an elective for all students with an emphasis on freshmen. The students will have two weeks of career education and one week each of business law, entrepreneurship, economics, finance, marketing, accounting and business ethics. Students will create a portfolio as a requirement of the course.

**Personal Finance(S)** 11 or 12 .5 credit

Topics of study will include managing personal income, spending, banking, retirement, saving, checking accounts, budget, credit cards, higher education costs, taxes, investing, and insurance. Personal finance will meet for a minimum of sixty-four hours, or one-half credit, designed to prepare students for the future.

**Principles of Management (CW)** 11 or 12 1 credit

This introductory course focusses on the basic management functions in business. The emphasis is on developing leadership, teamwork, and communication skills. Topics covered include management theory, planning, organizing, leading, motivating, and controlling, as well as management ethics, change, and global perspectives.

**STEM**

**Artificial Intelligence/Cyber Security/Animation (S)** 9, 10, 11 or 12 .5 credit

The Level IV Artificial Intelligence (AI) Kit will teach students about the core ideas of AI and how data is collected and arranged. In module one, students will learn the context of AI in modern technology and how laws and ethics are still being formed. Next, students will explore how AI uses patterns to learn data. By making a decision tree, students will build an interface model that emulates how humans would respond. In the third module, students will study machine learning using the program, Runway. Students will be able to create a slideshow presentation to show to the class. In module four, students will see how

AI is used in creative art. Students will work with online resources that use AI technology to make a new creative result. This leads into the fifth module where students will learn the organization and collection of data. Using key vocabulary, students will explore how their favorite apps collect and store data points. Finally, the kit ends with an ethics game in module six where students will be faced with ethical scenarios and instructed to choose their position on the issue.

The Cybersecurity Level IV Kit covers the critical concept of cybersecurity from the personal to corporate level. Students will take the time to consider their own use of cell phones, social media, and other Internet communication tools and what digital footprint they are leaving behind. Through interactive activities, they will learn about the basics of the Internet—how it works, binary code, and encryption. They will explore the importance of privacy and how to stay safe online. The kit will culminate with students researching cybersecurity jobs and experiencing simulated work as a cybersecurity specialist.

Animation is simply an illusion of movement in visual environments. Technology provides every person with the ability to create “magical” animations that are used in entertainment, presentations, social media campaigns, videos, and mobile experiences. Students learn animation basics through traditional cel animation and stop motion photography. In 3D animation, students learn about its rapid advancement and influence throughout multiple industries. Using stop motion animation and a programmable robot, budding animators mix multiple mediums to create their own choreographed dance moves.

**Engineering Design Process/ Robotics (S)**      9, 10, 11 or 12      .5 credit

In this kit, students will learn to design structures to solve everyday problems. Using a variety of brainstorming techniques, students will identify a problem, empathize with someone affected by the problem, then prototype a solution. These solutions will be created using simple 3D-design software. Once the ideas are generated, students will use 3D printers to rapid-prototype and test their ideas. Creativity, problem solving, failure, and feedback are all part of this project. At the conclusion, students will pitch their ideas to the class using a version of NBC’s “Shark Tank.” The larger group will then vote on the best ideas! Winning products can be outsourced for final fabrication or rewarded in another creative way.

In the Level Four Robotics Kit, students will develop a basic understanding of the design, construction, operation, and use of robots. The Kit supports the ISTE standard of students as computational thinkers. Specifically, it supports 5d. Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions. This Kit also provides the background understanding to support the ISTE standard of students as innovative designers and NGSS Engineering Design standards. In the first module, students will learn to think like an engineer by brainstorming a “useless” invention that solves an everyday problem. Students will learn the value of creative thinking and trying new ideas. In module two, students will examine what a robot is and what robots can be programmed to do. By learning what the core components of robots are, students will be laying the foundation for the remainder of this kit. The third module is all about electrical circuits. With hands-on activities, students will learn how circuits work and how they power robots. Students will diagram a loop circuit and practice working with a breadboard. In module four, the Arduino is introduced to increase the robot’s functionality. Students will learn and experiment with adding a logic board to their robots. Students will add components like a servo motor, fan, and LEDs in module five. By continuing to build on their knowledge of robots, students will become more familiar with what their robot is capable of doing. In module six, students will begin learning and applying basic coding. The robots will start moving in module seven! Building on what was learned about electrical circuits, students will design and program a moving part to their robot. Trial, error, and trying again will finally come to fruition in the final module when students will showcase their robots, designs, and creativity to the class. After putting together a slide presentation about their robot’s intention and design, students will show their classmates what they

have worked on and explain their process. They will have opportunities to learn how to code using their choice of Bloxter or Python.

**Coding (S)** 9, 10, 11 or 12 1 credit

Students in this course will gain the core knowledge needed to program in any language. They will begin by exploring programming including variables, input and output, conditions, loops, and expressions and quickly move on to using block coding to code sprites as well as a Raspberry PI and Breadboard. With this practical introduction to computer science concepts, students will be prepared to take their knowledge of programming to the next level. Then, the curriculum extends the Coding Foundations kit through an entire semester. Students will have the opportunity to delve deeper as they continue to develop their coding skills through online resources, Raspberry Pis, and more. They will be challenged to solve problems as they further hone their programming knowledge base and skill set.

**Drones (S)** 9, 10, 11 or 12 1 credit

The Certified for Flight, Level IV Kit introduces students to the next level of becoming a Certified Drone Pilot. Throughout the modules, students will be exposed to a variety of tasks and knowledge building activities that will grow their confidence and prepare them to pass the Part 107 Drone Pilot License exam. By the end of this kit, students will be versed in how to build and repair a drone, read Aeronautical Charts, and conduct flight plans for various situations

### **FAMILY & CONSUMER SCIENCE**

**Family & Consumer Science I (S)** 9, 10, 11 or 12 1 credit

This course is a comprehensive study of the five areas of family and consumer science, which include clothing and textiles, foods and nutrition, housing and home furnishings, child development, and consumer education.

**Family & Consumer Science II (S)** 10, 11 or 12 1 credit

This course is a comprehensive study of all six areas of family and consumer science which include clothing and textiles, foods and nutrition, housing and interior design, child development, consumer education, and career/work readiness. It is a continuation of the study begun in Family & Consumer Science I which is required before taking this course.

**Family & Consumer Science III (S)** 11 or 12 1 credit

This is the concluding course in the three-part study of family and consumer science. A concentrated effort is made in four of the five areas including clothing and textiles, food and nutrition, child development and consumer education. Students should have successfully completed Family and Consumer Science II prior to enrolling in this course.

**General Family & Consumer Science (S)** 9, 10, 11 or 12 .5 credit

This course is designed for students who are interested in learning basic principles of home economics as they apply to food and nutrition as well as consumer responsibility.

**Quilting (S)** 9, 10, 11 or 12 .5 credit

This course is designed for students interested in quilting and is individualized to meet basic to advanced ability levels. This course **REQUIRES** the student to make a quilt. It will be the responsibility of the student and parents to select and purchase the fabric, batting, and notions needed to complete the project.

**Experimental Foods (S)** 10, 11 or 12 .5 credit

This course is a comprehensive study of foods. The science of foods is studied in detail by conducting experiments with specific foods. Changing original recipes as well as writing new recipes are part of the class routine. Preference in scheduling will be given to eleventh and twelfth grade students.

**Family Living (S)** 10, 11 or 12 .5 credit

This course is designed to help students build appropriate relationships in the present with parents, siblings, peers, and teachers as well as those in the future as a spouse, parent and employee.

## **VOCATIONAL AGRICULTURE**

**Carpentry (S)** 11 or 12 2 credits

This course is designed to introduce students to the proper use and care as well as safety and maintenance of hand and power tools for carpentry. Design, layout and construction skills are initiated through the use of small group projects and concluded by constructing a building to scale as a class project. Due to safety issues, students must wear appropriate clothing when in the VoAg Area (i.e. Pants, closed toed shoes)

**Concrete/Masonry (S)** 10, 11 or 12 1 credit

This course provides instruction in mixing, pouring, finishing and curing concrete as well as placement of concrete masonry units. Students also receive practical experience in the use of the building/transit level and the operation of a backhoe/front end loader as they relate to the construction industry. Due to safety issues, students must wear appropriate clothing when in the VoAg Area (i.e. Pants, closed toed shoes)

**Conservation (S)** 10, 11 or 12 1 credit

This course is designed to teach students about soil structure and land surveying as well as outdoor survival skills and identification of trees and wildlife indigenous to Pennsylvania. Students will be introduced to the appropriate techniques and procedures necessary to conserve and manage these natural resources. Students will also learn basic skills for operation and maintenance of heavy equipment. Due to safety issues, students must wear appropriate clothing while in the VoAg Area (e.g., pants and closed-toed shoes).

**Forestry (S)** 11 or 12 2 credits

This course is a combination of theory and practical experiences requiring extensive involvement in the outdoor laboratory. Students gain entry-level employment skills as well as career knowledge through instruction in a wide variety of units related to the forest industry. Due to safety issues, students must wear appropriate clothing when in the VoAg Area (i.e. Pants, closed toed shoes)

**Plumbing/Industrial Electricity (S)** 10, 11 or 12 .5 credit

This course provides theory as well as practical experience in plumbing and industrial control circuitry. The plumbing portion of the course requires students to select plumbing materials, and then use the proper tools for the completion of projects. The electricity portion of the course requires students to use schematics for constructing and troubleshooting industrial circuitry. Due to safety issues, students must wear appropriate clothing when in the VoAg Area (i.e. Pants, closed toed shoes)



**Residential Electricity (S)** 10, 11 or 12 .5 credit  
This course involves the safe wiring and operating of electrical circuits of various complexities in residential applications. Due to safety issues, students must wear appropriate clothing when in the VoAg Area (i.e. Pants, closed toed shoes)

**Small Gas Engines (S)** 10, 11 or 12 1 credit  
This course is a study of the internal combustion engine with special emphasis on those that are air cooled with a single cylinder. Students not only receive instruction in basic mechanics theory, but also have the opportunity to make repairs, perform adjustments and troubleshoot engine systems. Due to safety issues, students must wear appropriate clothing when in the VoAg Area (i.e. Pants, closed toed shoes)

**Welding /Oxyacetylene (S)** 10, 11 or 12 1 credit  
This course is designed to teach students basic welding skills for an entry-level occupation. Students receive training in SMAW, TIG, and MIG welding, use of a plasma cutter, as well as oxyacetylene cutting, welding, and brazing. In addition, students will be introduced basic electrical circuit theory as well as distinguishing the differences in polarities and currents as they relate to the welding process. Students will understand how to safely use and maintain power tools such as grinders and chop saws. Students will also learn how to identify workplace hazards and understand how to properly identify and use fire extinguishers. Due to safety issues, students must wear appropriate clothing when in the VoAg Area (i.e. Pants, closed toed shoes)

**Home Maintenance (S)** 9, 10, 11, or 12 .5 credit  
This course is designed to teach students entry-level skills for upcoming vocational classes, home ownership, and work ethics. Students will receive training in various tools across many trades In addition, students will be introduced to hand tools and power equipment used in everyday life to maintain home/rental properties.

## **CAREERS**

### **Career Explorations**

This course is designed to prepare students for obtaining and retaining employment. Students will learn about different career opportunities and practice the skills needed to be successful employees. Students will complete aptitude tests, job applications, mock interviews, a presentation on their chosen career field, etc. This course is a graduation requirement and will be taken during the student's junior year.

## Career and Technical Center

The Career and Technical Center is located in Port Allegany and is under the direction of the Seneca Highlands Intermediate Unit 9. Students interested in this placement must be in grade 10, 11 or 12, with good academic standing. Students must also demonstrate good behavior and attendance patterns. Available seats at the Career and Technical Center are based upon availability and fluctuate from year to year. Students in this program travel to the Career and Technical Center every other day for a full day and stay at Kane High School on the opposite day. On the days spent at Kane High School, students will have a full academic schedule (see graduation requirements for CTC students on page 1). Students will be awarded 3 credits per year for successful completion of their program of study in the CTC program.

The following are the current programs offered at the Port Allegany CTC:

<b>Program Name</b>	<b>Length of Program</b>	<b>Certification Offered</b>	<b>Job Preparation</b>	<b>Abilities for Success</b>
Auto Mechanics	3 years	PA State Inspection License	Airplane or other Gasoline Engine Mechanic; Auto Mechanic; Automobile Salesperson; Front End Alignment Serviceman; Insurance Adjuster; PA State Certified Safety Inspection Mechanic; Parts Clerk; Service Manager; Small Engine Mechanic; Specialized Mechanical Work-Transmission, Electrical; Stationary Engine Mechanic	Students should possess good mechanical aptitude, mechanical problem-solving skills, and good hand-eye coordination. Measurement skills are essential for success. Physical strength, stamina and a willingness to work in a sometimes dirty environment is necessary.
Building Construction	3 years	Diploma	Building Materials Salesperson; Cabinet Installer; Carpenter; Electrician; Estimator; Floor Layer; General Building Constructor; Insulator; Mason; Plumber; Roofer	Students should be able to work at heights up to fifty feet. They must have reasonable physical stamina and strength to complete job assignments and be willing to work outside in inclement weather. Good mechanical aptitude and measurement skills are essential. Manual dexterity and good hand-eye coordination are necessary.

Early Childhood Education	3 years	<a href="#">CDA Certification</a> , First Aid/CPR	Preschool aide Teacher's aide Assistant group supervisor Preschool teacher Elementary teacher Childcare worker	The Early Childhood Education program is designed to teach students the aspects of teaching and working with young children, from birth through elementary age. Students will explore career pathways and develop the characteristics of successful teachers and childcare providers through practicums. Applying theoretical concepts to real-life situations, students are able to take what they have learned in the classroom to their rotation experiences where they learn how to meet the developmental needs and interests of young children.
Welding	3 years	<a href="#">AWS ~American Welding Society Certification, S/P2</a>	Prepare for a career as an entry level welder and/or welders' helper.	Use of MIG, TIG, Stick and Oxyfuel Welding. Perform Oxyfuel and plasma cutting and air arc gouging. Learn to choose the best welding and cutting process for the job at hand. Students should have good measurement skills and be willing to work outside and to get dirty.
Health Assistant	3 years	Nurse Aide/Child Care Aide	Child Care Worker; Companion for an Incapacitated Individual; Diet Kitchen Aide; Emergency Care; Geriatric Facility Orderly; Home Health Aide; Hospital Filing Clerk; Hospital Orderly; Medical Office Aide; Nurse Aide	Students must work under the direction of health care professionals; therefore, it is very important that they accept and carry out precise orders. A good health record and physical stamina are essential. Students must possess good communication skills. Individuals planning on entering post-secondary education for additional health-related certifications should plan their academic program to meet entrance requirements.

Heavy Equipment Maintenance	3 years	Inspection License	Equipment Manager; Equipment Mechanics-Heavy, Medium, & Light; Equipment Sales and Rental Agency Owner; Farm Equipment Mechanic; Parts Clerk; PA State Certified Safety Inspection Mechanic; Small Engine Mechanic; Truck Mechanic, Gasoline and Diesel	Students must be willing to work cooperatively with others. Manual dexterity, mechanical aptitude and measurement skills are essential. Physical strength and stamina are required in addition to a willingness to perform assigned tasks outside in inclement weather.
Metalworking Occupations	3 years	Diploma	Machine and Tool Salesperson; Machine Tool Operator; Machinist; Powdered Metal Worker; Tool and Die Maker; Tool room Clerk; Welder	Manual dexterity and mechanical aptitude skills are essential. Measurement and problem solving skills are used daily in shop activities. Physical stamina to stand for extended periods of time is necessary. Good hand-eye coordination is a must.
Network Systems Technology	2 years	CCNA	Cable Installer; Electronic Engineer; Network Designer; Network Specialist; Network Troubleshooter; Software Installer; Telephone Systems Installer	The student should have a pleasing personality, and the ability to communicate and work well with others. Manual dexterity and good hand-eye coordination is essential. The individual must be enthusiastic about computers and technology in general. Has above average abilities in math, reading, science, possess problem solving skills and is self-motivated.