

MILTON AREA SENIOR HIGH SCHOOL



MILTON AREA SCHOOL DISTRICT
Preparing students for 21st century success through Educational Excellence.

COURSE DESCRIPTIONS For Grades 9, 10, 11, 12

2018-2019

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GRADUATION REQUIREMENTS

Graduation from Milton Area Senior High School, which is accredited by the Pennsylvania Department of Public Instruction and Middle States Association, must be in accordance with the Graduation standards established by the State Department and the local Board of Education.

The required number of credits for graduation from Milton High School are listed below:

CONTENT AREA	NUMBER OF CREDITS
English	4
Math	4
Science	4
Social Studies	3
Physical Education	2
Health	$\frac{1}{2}$
Other Electives	<u>4 $\frac{1}{2}$</u>
Total Credits	22

HONORS COURSES

Several elective courses for academic senior high students are designed to stretch the abilities of our most talented students through rigorous mental exercise. These courses require that students do a great amount of research outside of class without specific teacher guidance in order to be prepared for equally challenging sessions with the teacher in the classroom. They are classes designed for the most able students who are intending to further their education.

All colleges and universities ask for a student's transcript, and many specifically ask students to list the honors courses they have successfully completed. It is to the student's advantage to list honors courses; colleges value these credits highly.

The requirements for an Honors Course designation are usually as follows:

1. A commitment to academic excellence.
2. Rigorous scholarship beyond the level found in regular high school courses.
3. Extensive out of class research and development.
4. Some course may require teacher recommendation, pre-requisite, and proficiency on standardized tests.

Honors Courses

Algebra 2	English 9, 10 & 11	Anatomy & Physiology
Calculus	Journalism 3 & 4	Biology 1 & 2
Geometry	French 4	Physics
Trigonometry	Spanish 4	World History

ADVANCED PLACEMENT COURSES

Advanced Placement courses allow students to complete college level coursework while still in high school. These courses require extensive work both in and outside of class and should be selected only by highly capable and motivated students. **Independent readings and additional activities will be required during the summer prior to the start of the class.** All students enrolled in advanced placement courses are expected to take the Advanced Placement Test during the spring of the year they are enrolled in the course. **Students should check with their Guidance Counselors to see if there is any cost that is associated with taking the AP test.** Strong performance on the Advanced Placement Test may allow students to gain college credit prior to officially starting college.

Advanced Placement Courses

AP European History	AP Calculus (AB and BC)	AP Biology
AP US History	AP Literature & Composition	AP Chemistry
AP Psychology	AP Studio Art	AP Art History

COURSE WEIGHTING

All college preparatory courses (designated A) will be weighted at 1.03. All Honors courses (designated H) will be weighted at 1.05 and all Advanced Placement and PC Now courses will be weighted at 1.07. Weighting will be used to compute students' grade point average and class rank.

ADVANCE COLLEGE EXPERIENCE (ACE)

Milton Area High School participates in the Advance College Experience (ACE) at Bloomsburg University. This allows qualified students to take one or more college credits at a reduced rate of 75% on tuition. Further information and application on this program may be found at: www.bloomu.edu/ace. Students interested in this program should meet with their guidance Counselors to verify credit requirements for graduation

DUAL ENROLLMENT PENN COLLEGE (Penn College NOW)

Penn College NOW is a program which allows students to take college classes while in high school. The courses are taught at the high school by Penn College approved high school instructors.

To enroll in a Penn College NOW course you must pass an entrance level reading and/or math test depending on the course that you are applying for. Certain courses may also require that students meet pre or co-requisites required for individual courses.

Generally, 11th and 12th grade students are eligible to participate in the program. A limited number of classes are available to 10th grade students.

Penn College NOW credits will appear on a Penn College transcript and may be applied toward specific Penn College degrees. The extent to which a course will transfer to another college or university is at the discretion of that college or university.

The following PC Now Courses are offered at Milton Area High School:

PC Now 3D Parametric Modeling	PC Now Anatomy and Physiology	PC Now Architectural CAD	PC Now Chemistry
PC Now Detailing 1	PC Now English 12	PC Now Information, Technology, and Society	PC Now Intro to Financial Accounting
PC Now Intro to Gaming	PC Now Intro to Business	PC Now Psychology	PC Now Sociology
PC Now Technical Drawing 1			

Descriptions of these courses can be found at [PC Now Course Descriptions](#) .

DUAL ENROLLMENT LACKAWANNA COLLEGE

The Dual Enrollment program through Lackawanna College allows high school students to gain a head start on their college careers within the confines and hours of Milton Area High School. Students may obtain credits in college level courses through Lackawanna College by completing all requirements of the matching course at Milton. The following courses are offered:

- Principles of Accounting
- U.S. History
- Statistics and Data Analysis
- Intro to Literature
- Intro to Psychology

SOAR ARTICULATION CREDITS

The Pennsylvania Department of Education (PDE) supports Career and Technical Education (CTE) students aligning their high school courses to a college program in order to complete a degree, diploma or certificate.

What is SOAR?

SOAR stands for Students Occupationally and Academically Ready. SOAR programs articulate skills and tasks gained at the secondary school (high school) level to course credit earned in a postsecondary (college) degree, diploma or certificate program. In short, students who complete CTE programs at Milton Area High School can earn anywhere from 6 – 12 free college credits towards their particular career field. Specific information about the articulation can be found in the Guidance office or at www.collegetransfer.net

NCAA INFORMATION

The NCAA Eligibility Center implements policies to help prepare student athletes for the rigors of college. It also certifies the credentials of students who want to play sports at a NCAA Division I or II academic institution.

The following requirements must be achieved in order for the student to be able to receive a scholarship to a NCAA Division I or II college or university.

Division I:	Division II:
16 Core Courses	16 Core Courses
4 years of English	3 years of English
3 years of math (algebra 1 or higher level)	2 years of math (algebra 1 or higher level)
2 years of natural or physical science (including one year of lab science if offered)	2 years of natural or physical science (including one year of lab science if offered)
1 extra year of English, math, or science	3 extra years of English, math, or science;
2 years of social science	2 years of social science
4 years of additional core courses (from any category above, or in a foreign language, nondoctrinal religion, or philosophy)	4 years of additional courses (from any category above, or in a foreign language, nondoctrinal religion, or philosophy);

For further information please go to the NCAA website.

COURSES

English Courses

English 9

Course #101.2

Grade 9

Credit: 1.0

English 9 is a course that is designed from the PA Common Core Curriculum Standards for Composition and English Language Arts. Students will be exposed to the genres of literary fiction, literary non-fiction, and informational texts with emphasis on argumentative and expository composition and integration of text evidence in response to literature. Reading, Writing, Speaking, Listening, Research, and Technology skills will be integrated into each unit throughout the 90 minute blocked semester course to help prepare students for the Keystone exams, college, careers, and life-long learning.

Honors English 9

Course 101.3

Grade 9

Credit: 1.0

Students will focus intensively on analyzing, producing and revising Informational and Persuasive writing using mostly journalistic non-fiction sources. Some finished student work will be published in the student news magazine and other publications. This class is only available to students who have their 8th grade English teacher's recommendation AND a minimum of a "proficient" score on the 8th grade Reading and Writing PSSA tests. (*9th graders may not enroll in Journalism I; upperclassmen may not enroll in English 9H.*) This course demands some out of class hours on the part of the student. **English 9H is required for any student considering taking Journalism.**

English 10

Course #111.2

Grade 10

Credit: 1.0

English 10A emphasizes the skills necessary for analyzing and synthesizing literature (nonfiction and fiction) through the practice of basic literary analysis. Standard literary terms will be introduced and applied to the written analysis of short fiction, nonfiction, plays, and poetry. Students will study literature and media from around the world, with an emphasis on Non-Western cultures, to gain an understanding of commonalities and differences among human cultures. By the end of the course, the successful student will be able to demonstrate mastery of all concepts set forth in the PA Common Core Standards at the 9-10 grade level.

Honors English 10

Course #111.3

Grade 10

Credit: 1.0

Classroom instruction will be designed to develop the ability for reading high level literary and nonfiction text, evaluating literature and non-fiction and writing (formally and informally) for a variety of audiences and purposes. Students will conduct research using a variety of reliable sources and will present information orally and in writing. Classroom instruction will include reading, writing, listening and speaking skills as dictated in Pennsylvania's Core Standards.

English 11

Course #121.2

Grade 11

Credit: 1.0

This course focuses on the skills required by the Pennsylvania Common Core Standards for 11th grade English Language Arts. Students will read and analyze various American literature texts from the major literary time periods, including fiction and nonfiction, from the works of the earliest settlers through those of contemporary writers. Composition instruction will focus on improving student writing skills in various writing styles through a variety of assignments with an emphasis on the research process and the skills necessary to produce an argumentative research paper. Student vocabulary and grammar skills will continue to be emphasized.

Honors English 11
Grade 11

Course #121.3
Credit: 1.0

Honors English 11 is designed as a full credit replacement for the English 1 requirement. This advanced course is designed for highly motivated juniors who plan to attend a post-secondary educational institution and desire an intensive, rigorous course in reading and writing. The course focuses on the skills required by the Pennsylvania Common Core Standards for 11th grade English Language Arts. Students will read, analyze and evaluate various American literature texts from the major literary time periods, including fiction and nonfiction, from the works of the earliest settlers through those of contemporary writers. Writing instruction will focus on strengthening student writing skills through intensive and varied writing assignments including analysis and synthesis of varied sources to create research based compositions. Student vocabulary and grammar skills will continue to be emphasized and incorporated within the literature and writing units of study.

English 12
Grade 12

Course #131.2
Credit: 1.0

This course is designed to fulfill the curricular requirements of English as defined by the State and Common Core standards. The class is divided to encompass a wide range literature and genres, allow for close reading of individual texts, enhance grammar skills, and develop vocabulary acquisition. The course will be integrated with ample opportunities to develop a sophisticated writing style and improve as an analytical reader.

PC Now English 12
Grade 12

Course #131.3
Credit: 1.0

This class is intended for seniors that would like to continue their education after graduation. The class will encompass a wide range of literature and genres, allow for close reading of individual texts, enhance grammar skills, and develop vocabulary acquisition. In addition, as a college level transferrable class, it will focus on fundamental writing and research skills with an emphasis on expository writing. Emphasis on literary analysis, discussion, and practice of writing that explores, explains, and argues. 3 Credits eligible at Penn College or transferable credits to a list of other colleges. **Prerequisite(s):** Placement by Examination administered at Milton High School.

AP Literature and Composition:
Grade 12

Course #122
Credits: 1.50

This course is designed to fulfill the curricular requirements described in the AP English Course Description for Literature and Composition. The class is divided to encompass a wide range of time periods, cultures, and genres and to allow for close reading of individual texts. The course will be integrated with ample opportunities to develop a sophisticated writing style, including appropriate diction, varied syntax, logical organization, substantiated generalizations, apt selection of detail, appropriate tone, and consistent voice. Students will be required to complete summer assignments.

Journalism/Reporter
Grades 9, 10, 11 & 12

Course #873.2
Credit: 1.0

Recommended prerequisite: Prerequisite: Minimum grade of 70% in prior year's English class.

Journalism/Reporter is designed to familiarize students with all phases of newspaper reading and writing as well as to provide a service to the school and community by publishing their own school newspaper. Students are taught to communicate, understand, and respect the written word through the media of newspapers. Specifically, they learn the theory and practice of newspaper writing and evaluation in the areas of news, sports, features, and editorials. The total production of their own school newspaper including planning, writing, editing, photographing, advertising, and laying out gives them practical application of the skills which they are taught. As time permits, students learn design and computer layout of pages. This course demands many out of class hours on the part of the student.

Journalism/Editorial
Grades 10, 11 & 12

Course #875.2
Credit: 1.0

Prerequisite: Successful completion of Journalism/Reporter

Journalism/Reporter is a pre-requisite for this advanced course in Journalism. Areas taught in Journalism/Reporter are reviewed and expanded. The student in Journalism/Editorial accepts more responsibility in various editors' positions on the staff of the school paper. Design and computer layout of pages is learned and mastered. Students also run a news bureau, and are responsible for writing school press releases for the local newspaper. Advanced study of professional publications takes place with emphasis on the power and responsibility of the media. In continuation of this, students study and experience radio and television broadcasting as time permits. This course demands many out of class hours on the part of the student.

Math Courses

Keystone Algebra Grades 9

**Course #201.1
Credits 1.0**

This course is designed to reinforce algebraic concepts necessary to apply in future courses and to successfully complete the Keystone Algebra State Exam. This course will provide a structure a review and apply key concepts of eligible content on the state exam. **Students will be identified based on previous Algebra scores and data obtained through testing as well as teacher recommendations.**

Algebra 1 Grade 9

**Course #211.2
Credit: 1.0**

Teacher Recommendation

This course will provide a structure to apply key concepts of the PDE Algebra 1 Eligible content. Topics include operations with real numbers, polynomials, systems of linear equation and inequalities, functions, coordinate geometry, data analysis and probability. **This course is a foundational course and serves as the main pre-requisite for every other high school class.**

Algebra II Grades 9, 10 & 11

**Course #221.2
Credit: 1.0**

Recommended Pre-requisite: Algebra 1

This is the second course in our two year Algebra sequence and is a continuation of the Algebra 1 curriculum. Topics include analyzing the characteristics of polynomial, rational, exponential, and logarithmic function families. Other topics from the PDE Keystone Algebra II Eligible Content include an introduction to complex numbers, basic sequences, and modeling data with regression equations.

Honors Algebra II

Course #221.3

Grade 9, 10 & 11 (9th grade teacher recommendation & proficiency on Algebra 1 Keystone Exam required) Credit 1.0

Prerequisite: Minimum grade of 85 Algebra 1 & proficiency on Keystone Exam.

This second course in our two year Algebra sequence and is a continuation of the Algebra 1 curriculum. Topics include analyzing the characteristics of polynomial, rational, exponential, and logarithmic function families. Other topics from the PDE Keystone Algebra II Eligible Content include an introduction to complex numbers, basic sequences, and modeling data with regression equations. The honors course will be more in depth with more rigor and application of content.

Geometry Grades 10, 11 & 12

**Course #231.2
Credit: 1.0**

Pre-requisite: Algebra 1

Geometry is a mathematics course designed to give students an in-depth study of measurements, properties, and the relationships of points, lines, angles, surfaces, and solids. Special emphasis will be placed on application and the nature of proof and students will experience writing proofs in two-column form. The learning of theorems, postulates, definitions, and vocabulary is essential.

Honors Geometry Grades 10, 11 & 12

**Course #231.3
Credit 1.0**

Recommended Prerequisite: Minimum grade of 83% in Algebra 1

This class takes the classical approach to Euclidean or planar geometry. Reasoning and logic skills will be honed through problem solving, concept application, and proving the properties of parallel lines, triangles, quadrilaterals, and circles. Other topics from the PDE Keystone Geometry Eligible Content include transformation, right triangle trigonometry, area, solids, and geometrical probability.

Trigonometry Grades 10, 11 & 12

**Course #241.2
Credit: 1.0**

Recommended Prerequisite: Minimum grade of 83% in Algebra 2

By building upon the concepts presented in algebra and geometry, this course helps prepare the student for more advanced mathematics and science courses. This course will cover exponential and logarithmic functions, sequences and series, triangle trigonometry, trigonometric graphs and identities, coordinates, inverse functions and equations, and analytic geometry. For the student who does not plan to take advanced courses, trigonometry should prove helpful when taking the basic college mathematics course needed to meet college graduation requirements.

Honors Trigonometry**Grade 10, 11 & 12****Recommended Prerequisite: Minimum grade of 83% in Algebra 2**

This course is for students who are planning to take either Honors Calculus or AP Calculus in their senior Year. This course will build upon the concepts presented in algebra and geometry, and help prepare students for advanced mathematics and science skills. This course will cover the following concepts: polynomials, exponential and logarithmic functions, trigonometry functions, parametric equations, polar equations, and an introduction to calculus. The pace of the material presented in this course is geared to preparing students for an Advanced Placement Program.

Course #241.3**Credit: 1.0****Probability and Statistics****Grades 11& 12**

This course is designed to teach the field of statistics for the college bound student. The content of the course will be taught in four units: Descriptive Statistics, Probability, Inferential Statistics Concepts, and Inferential Statistical Methodology. Topics to be covered are Introduction to Statistics, Displaying Data, Frequency Distributions, Measures of Central Tendency, Measures of Dispersion, Describing Individual Performances, Elementary Probability, Probability Distributions, Applied Sampling, Estimation, Hypothesis, Testing, Correlations, Regression Analysis, t-Test, Analysis of Variance, and Chi Square. There is also an ACCSTAT Computer Program that will be utilized for the course.

Course #261.2**Credit: 1.0****Honors Calculus****Grade 11 & 12****Prerequisite: Minimum grade of 83% in Trigonometry**

Calculus is a mathematics course designed to study change and motion. The course covers differential and integral calculus. Calculus provides methods to find rate of change, slope of a curve, velocity of an object and more. It uses algebra, trigonometry, and analytic geometry.

Course #251.3**Credit: 1.0****AP Calculus AB****Grade 11 & 12****Prerequisite: Minimum grade of 83% in Trigonometry**

Calculus is a mathematics course which studies change and motion. The course covers differential and integral calculus. The course content follows the Advanced Placement Course Description and students are expected to take the Advanced Placement test near the end of the year. Calculus provides methods to find rate of change, slope of a curve, velocity of an object and much more. It uses algebra, trigonometry, and analytic geometry. Calculus opens doors to the study of many other areas. This is an excellent course for exceptional math students.

Course #281.4**Credits: 1.50****AP Calculus BC****Grade 12****Prerequisite: Minimum grade of 83% in AP Calculus AB**

AP Calculus BC is roughly equivalent to both first and second semester college calculus courses and extends the content learned in AB to different types of equations and introduces the topic of sequences and series. This course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. You will learn how to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. **Teacher recommendation is required to complete the full sequence.**

Course #283.4**Credits: 1.50****Science Courses****Biology 1A****Grades 9****Prerequisite: Algebra 1**

This course is designed for all students. The following areas are covered: Basic biological principals, chemical basis for life, ecology, bioenergetics, homeostasis and transport, cellular growth and reproduction, genetics, and the theory of evolution. In each area the students are made aware of the interrelationships that exist within the living world and life's dependence on the nonliving one. The course will meet daily for one year. There is also a required Keystone exam at the end of the course.

Course #331.2**Credit: 2.0**

**Honors Biology 1
Grade 9**

**Course #331.3
Credits 1.0**

By placement only

Based on PVAAS student projection reports and 8th grade Science PSSA results;

This course is designed for all students. The following areas are covered: basic biological principals, chemical basis for life, ecology, bioenergetics, homeostasis and transport, cellular growth and reproduction, genetics, and the theory of evolution. IN each area the students are made aware of the interrelationships that exist within the living world and life's dependence on the nonliving one. The course will meet daily for one semester. There is also a required Keystone exam at the end of the course.

**Chemistry
Grades 10 & 11**

**Course #351.2
Credit: 1.0**

Prerequisite: Enrolled in Algebra 2.

This course is designed for students expecting to pursue formal education after high school. The students will develop an understanding of the basic principles of chemistry and their applications to other fields of science. The students will gain skills using unit factor method in problem solving. They will apply the laws and theories of chemistry in a mathematical manner. Laboratory skills will be developed through practice. The division is approximately 20% laboratory, 40% problem solving and 40% chemical principles and theories. This course meets every day for one block.

Honors Chemistry

Course #351.3

Grades 10 & 11

Credits: 1.25

Prerequisite: Enrolled in Algebra 2 or a higher math, Honors Biology

Honors Chemistry will be a first year chemistry course for student covering basic chemistry information at a relatively fast pace and including related math and content in each unit. This chemistry course is designed for students planning on continued education in the science fields and who have a strong math background. It is a pre-requisite for AP Chemistry and for AP Biology. Some students may take Organic Chemistry simultaneously with Honors Chemistry, though it is recommended to take Organic after a first year chemistry course. This course should follow Honors Biology (or a proficient or better in the Biology Keystone) and successful completion of algebra 1. It will be offered as a option to Chemistry 1.

**Organic Chemistry
Grades 11 & 12**

**Course #361.2
Credit: 1.0**

Prerequisite: Chemistry 1A

Organic Chemistry is designed as a one semester course for students who have successfully completed Chemistry 1 and are interested in continuing their chemistry knowledge for another semester. The class will include the study of carbon, its compounds, and reactions with these compounds. Learning will be through both lecture and laboratory experiences. This class is strongly suggested for those students who are not taking AP Chemistry, and are planning on entering post-graduate work in the sciences, including engineering, health or veterinary fields. It is also recommended for students who completed AP Chemistry.

**AP Chemistry
Grades 11 & 12**

**Course #382.4
Credits: 2.0**

Prerequisite: Minimum grade of 83% in Chemistry-1A

The AP Chemistry course meet the entire year, with a whole block every day for each semester. It is designed to deliver to the student the knowledge equivalent to either three quarters or two semesters of college level chemistry. The class will also prepare the student to take the AP exam in May. The course is an intensive study of freshman college chemistry, which includes college level laboratory activities. The course is extremely fast-paced and requires an average of one hour per night study time. Prerequisite for AP Chemistry is a mid-B year average for Chemistry 1A. Those students who choose to take this class with such an average or better will have a good chance for success in AP Chemistry.

Honors Biology 2
Grades 11 & 12

Course #229
Credit: 1.25

Prerequisite: Biology 1A or Honors Biology 1, and Chemistry 1A

The purpose of this advanced level course is to prepare students for college level concepts in the Biological Sciences and to provide further laboratory experience and skill to the student who may wish to pursue a career in the health. The course content picks up where Biology 1A and Biology 1H stop. Subject matter covers the following topics: viruses, bacteria, protists, fungi, plants and animals. Structural form and function will occur with dissections of plants, and animals as well as behavioral study will be addressed. This course is open to anyone who has successfully completed the prerequisites and is also recommended (but not required) to student expecting to take AP Biology.

AP Biology
Grade 11 & 12

Course #381.4
Credit: 1.50

Prerequisite: Minimum grade of 83% in Biology 1A, or Honors Biology 1, Chemistry 1, and Algebra 2.

The purpose of this advanced level course is to prepare students for college level concepts in the Biological Sciences. The course content follows the Advanced Placement Course Description provided by The College Board. Students will take the Advanced Placement test in May. Subject matter centers on the following topics: cell physiology, biochemistry and molecular biology, botany, evolution, virology, bacteriology and genetics. The course is an intensive study of freshman college biology, which includes college level laboratory activities. The course is extremely fast-paced and requires an average of one hour per night study time. The Advanced Placement course is designed for students who will major in Science, Mathematics, Engineering, or Pre-Med, but is also a path for other college-bound students to receive a college Biology credit.

Introduction to Physics
Grades 10, 11 & 12

Course #371.2
Credit: 1.0

Prerequisite: Minimum grade of 80% in Algebra 2

This course will cover a wide range of basic physics concepts. These concepts will be viewed from the theoretical side and a more practical side. Topics such as the relationship between energy and matter, the study of Newton's laws of motion, and problem solving using vectors will be discussed. Exploring the physics behind the operation of everyday items such as, tools and machinery. This course is intended to provide an understanding of how physics affects and describes our universe. This course would benefit students pursuing careers which would not require advanced science studies, as well as technical students wanting to understand the science behind today's technology.

Honors Physics
Grades 10, 11 & 12

Course #372.3
Credits: 1.25

Prerequisite: Minimum grade of 80% in Trigonometry, or seniors currently enrolled in Trigonometry.

This course will cover many of the same topics as Intro to Physics, however with much greater depth. The major focus of the course will be vector algebra, kinematics (study of motion), Newton's Laws of Motion, momentum work, power, and energy. Activities will involve the study of physics theories along with problem solving and laboratory work. This course is intended to prepare students to begin college level physics. While this is not an advanced placement course, most topics will be covered to the depth necessary to aid students taking future physics courses,

Environmental Science
Grades 11 & 12

Course #321.1
Credit: 1.0

Environmental health Science is a course that is very lab and project based. This course will cover topics related to preserving our environment and making us better caretakers of the earth. Current topics of study include climate change, bees, and oceanography. Upon successful completion of this course, students should be able to use the scientific skills and process and major environmental science concepts to understand interrelationships of the natural world and to analyze environmental issues and their solutions.

Honors Anatomy and Physiology
Grades 11 & 12

Course #345.3
Credit: 1.0

Prerequisites: Biology 1 A or Honors Biology & Algebra 1

This course will give students a thorough background in the systems that make up 75-80% of an initial college level Anatomy and Physiology course or Human Biology course. The text used in this class is a college level book that emphasizes deductive reason and critical thinking. This class will study human body systems as they build on the concept of homeostasis and how body systems relate to each other. Therefore, memorization of material is not as important as the understanding of concepts and their use.

Animal Science – Zoology
Grades 9, 10, 11, 12

Course # 311.1
Credits 1.0

The major focus of the Animal Science - Zoology course is to expose students to animal science, agriculture, and related career options. Students participating in this course will have experiences in various animal science concepts with exciting hands-on activities, projects, and problems. Students' experiences will involve the study of animal anatomy, physiology, behavior, nutrition, reproduction, health, selection, and marketing. For example, students will acquire skills in meeting the nutritional needs of animals while developing balanced, economical rations.

Additional Information

Throughout the course, students will consider the perceptions and preferences of individuals within local, regional, and world markets. Students will explore hands-on projects and activities to learn the characteristics of animal science and work on major projects and problems similar to those that animal science specialists, such as zoologists, veterinarians, livestock producers, and industry personnel, face in their respective careers. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community. The Animal Science - Zoology course of study includes: A) Background and Social Issues of Animal Science, B) Anatomy and Physiology, C) Nutrition, D) Reproduction, E) Genetics, F) Animal Health, and G) Animal Selection.

Plant Science – Botany
Grades 9, 10, 11, 12

Course # 301.1

In Plant Science - Botany, students will experience various plant science concepts through exciting "hands-on" activities, projects, and problems. Student experiences will include the study of plant anatomy and physiology, classification, and the fundamentals of plant production and harvesting. Students will learn how to apply scientific knowledge and skills to use plants effectively for agronomic, forestry, and horticultural industries. Students will work on major projects and problems similar to those that plant science specialists, such as horticulturalists, agronomists, greenhouse and nursery managers, and plant research specialists, face in their respective careers by improving their investigative, experimental and communication skills.

Additional Information

The Plant Science - Botany course is structured to enable all students to have a variety of experiences that will provide an overview of the plant industries. The Plant Science - Botany course includes the following units of study: A) Plant Anatomy and Physiology, B) Taxonomy, C) Plant Growing Environments, D) Plant Reproduction, E) Mineral Soils and Soilless Systems, F) Crop Production and Marketing.

Social Studies Courses

American Government
Grade 9

Course #452.2
Credit 1.0

This course is about government in the United States, the way it is organized, the way in which it is controlled by the people, and the various ways in which it completes its various responsibilities. Our American system of government is very dynamic. It is always changing, adapting, and growing, even though its fundamental principles and its basic structure remain constant. This course will attempt to take the many conflicting parts (Constitution, Congress, The Presidency, Courts, Political Parties, Electoral Process, and Civil Liberties) and show how they interrelate in forming the most unique government ever created by man. The academic section will also place special emphasis on economic principles and how they relate to the free enterprise system. All assignments must be submitted on time for full credit. This course meets every day for one year.

World History
Grades 10

Course #411.2
Credit: 1.0

Recommended Prerequisite: American Government A

World History is designed to teach students about the political, economic, and cultural traditions that have formed the basis for modern western civilization. Students will explore the relationship between the western nations and other regions of the globe from the 1400s to the present day. Major topics will include the Renaissance and Reformation, Age of Exploration, Enlightenment & French Revolution, Industrial Revolution, World War I, World War II and the Cold War & Decolonization. The course also includes introductory units on Classical Greece, the Roman Empire and European Middle Ages.

Honors World History
Grades 10

Course #411.3
Credit: 1.0

Recommended Prerequisite: American Government A

Honors World History is designed to teach students about the political, economic, and cultural traditions that have formed the basis for modern western civilization. Students will explore the relationship between the western nations and other regions of the globe from the 1400s to the present day. Major topics will include the Renaissance and Reformation, Age of Exploration, Enlightenment & French Revolution, Industrial Revolution, World War I, World War II and the Cold War & Decolonization. The Honors sections of this course will include a greater emphasis on writing and historical analysis.

US History
Grade 11

Course #431.2
Credit 1.0

US History is designed to teach students about their cultural and intellectual heritage. Students will explore the economic, social and political events that have shaped the United States during its history. Cause and effect relationships will be emphasized throughout the course. Some of the topics covered will include the road to the American Revolution, the early republic, American Imperialism, reform movements, American involvement in two world wars, the Great Depression, the cold War, and the United States in the world today.

AP U.S. History
Grades 11& 12

Course #481.4
Credits: 1.50

Recommended Prerequisite: Successful completion of U. S. History and U. S. History 2.

The AP Program in United States History is designed to provide students with analytic skills and factual knowledge necessary to deal critically with the problems and materials in United States History. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by introductory college level course. Students will learn to assess historical materials - their relevance to a given interpretive problem, their reliability, and their importance - and to weigh the evidence and interpretations presented in historical scholarship. This course will also help students develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. A summer reading assignment with a written assessment must be successfully completed to gain entry into the course. Students are expected to take the Advanced Placement Test near the end of the school year.

AP European History
Grades 11 & 12

Course #483.4
Credits 1.50

The study of European History since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which we live. This is an upper level history course for juniors and seniors. There is a summer reading assignment that must be successfully completed to gain entry into the course. All students are required to take the AP exam near the end of the year. This course will meet every day for one year.

The Modern World
Grades 12

Course #421.2
Credit: 1.0

Recommended Prerequisite: U. S. History A

Modern World is a class designed to teach students about the major events that have shaped the United States and the world since the end of World War II. An Emphasis will be place on U.S. foreign policy decisions and how those decision have affected our relationship with other countries. The major events that comprise the class are divided between the Cold War (1945-1991) and the War on Terrorism (1982-Present). Important topics will include the Space Race, Cuba, Vietnam War, Iranian Revolution, Collapse of Soviet Union, Yugoslav Wars, Motives for Terrorism, the War in Afghanistan (2001), the War in Iraq (2003) Spying & U.S. Intelligence Agencies and Arab Spring. The overall goal of the class is to give students a better understanding of our role in the world and explain why so many countries dislike the United States. This class includes a film study element which has students analyze films that relate to major topics discussed throughout the course.

Physical Education and Health Courses

Physical Education Grade 9

This course will be paired with Computer Application for Academic Personal & Career Success (see description for this course under Business Electives)

**Course #701.1
Credit: .50**

Physical Education Grade 10

**Course #711.1
Credit: 1.0**

Physical Education Grade 11

This course will be paired with Health

**Course #721.1
Credit .50**

Health Grade 11 Requirement

The World Health Organization's definition of good health is "The state of complete mental, physical, and social well being, not just the absence of disease." Based on this definition, the 11th grade health class will include information from all three aspects of good health. Some of the major topics covered in this course will be stress, drugs, alcohol, tobacco, fitness, nutrition, and disease.

**Course#741.1
Credit: .50**

Physical Education Grade 12

Physical Education is designed to introduce students to a variety of different activities that could potentially increase ones level of fitness. The emphasis is placed on activities that students can participate in throughout a lifetime not just in high school. It is important for students to understand that there are a variety of different ways to improve one's fitness level other than just a traditional workout. Some of the activities students will participate in are soccer, badminton, volleyball, basketball, strength training, ultimate Frisbee and more.

**Course #731.1
Credit 1.0**

Powerweights Grade 12

This course is designed for the student who has been lifting weights and already has a program as well as for the student who has never lifted a weight or done a push up. The course will work on three levels: first, the cognitive level, second, the affective level, and third, the psychomotor level. This means that the student will be learning the concepts, principles, and general knowledge of strength training and fitness. The cognitive level means that the student will have the knowledge to create a complete fitness program. The ability to work with a partner in class and dressed, and generally put forth effort working on his or her program is the affective level. The third level is the psychomotor level: this is the ability to correctly perform the skills necessary to meet the goals of the student's program.

**and Conditioning Course #751.1
Credit: 50**

Adaptive Physical Education Grades 9, 10, 11 & 12

Adaptive Physical Education is a diversified program for students whose physical **limitations** restrict their participation in the vigorous activities of the general physical education program. This program presents the students with developmental activities, sports, games, and rhythms suited to the interest and capabilities of each individual student. Identification and assignment of students for this program is done through the combined effort of the program instructor, school nurse, guidance counselor, building principal, and physician's recommendation.

**Course #771.1
Credit: .50**

ELECTIVES

Art Electives

Introduction to Art
Grades 9, 10, 11 & 12
Prerequisites: None

Course #551.1
Credit 1.0

This course is designed as an introduction to most of the other courses offered in the art program. Successful completion of this course is required for advancement to other art courses. In this course students will develop fundamental skills in the following areas: drawing, design, pottery, sculpture, painting, art history, and career opportunities in the field of art. Class projects, homework, tests, and participation will be used for evaluation. This course meets every day for one semester.

Drawing
Grades 9, 10, 11 & 12

Course #552.1
Credits 1.0

Prerequisites: Successful completion of Intro to Art or teacher recommendation.

This course is designed to provide students with an introduction to a variety of drawing media, techniques, and concepts. Class projects, homework, tests, and participation will be used for evaluation. This course meets every day for one semester.

Painting
Grades 10, 11 & 12

Course #554.1
Credits 1.0

Prerequisites: Successful completion of Intro to Art I and Drawing or teacher recommendation.

This course offers an exploration of the various painting techniques and media including watercolor, acrylic, and oil paintings. Class projects, homework, tests, and participation will be used for evaluation. This course meets every day for one semester.

Pottery
Grades 9, 10, 11 & 12

Course #556.1
Credits 1.0

Prerequisites: Successful completion of Intro to Art or teacher recommendation.

This course includes studio work in hand building and wheel throwing techniques. Hand built techniques of pinch, coil, and slab will be covered. Historical and cultural aspects of pottery will be discussed. Class projects, homework, tests, and participation will be used for evaluation. This course meets every day for one semester.

Digital Photography
Grades: 9, 10, 11 & 12

Course #559.1
Credits 1.0

This course will focus on how to take a photograph that is compositionally correct, focusing on the elements and principles of design, and implementing that knowledge into photographs of Landscapes, Portraits, Photojournalism, and Abstraction. This course will also focus on self-critiquing as well as peer critiquing in order for the student to grow artistically as photographers. The students will build a solid digital portfolio of Landscapes, Portraits, Photojournalistic, and Abstract works. Requirements: Personal Digital Camera This course meets every day for one semester.

Three Dimensional
Grades: 10, 11 & 12

Design Course #558.1
Credits 1.0

Prerequisite: Successful completion of Intro of Art.

In this class students will learn about the history and diversity of three dimensional art. Three dimensional art will encompass sculpture as well as crafts. Student will create a variety of three dimensional works using a variety of different techniques. Class projects, homework, tests, and participation will be used for evaluation. This course meets every day for one semester.

Portfolio Prep
Grades: 11 & 12

Course #557.1
Credits 1.0 - 2.0

The primary purpose of this course is to give advanced art students the opportunity to explore individual ideas, develop skills, and build a solid diverse portfolio that could be used as a college entrance requirement. Students may elect to take this course for one or two semesters.

For college bound art students, it is recommended to take this course the second semester of their junior year, and the first semester of their senior year. This will allow time for portfolio development and refinement prior to submitting their portfolio to a university. This course will meet day for one or two semesters.

Business Electives

Career, Academic and Personal Success – (CAPS)

Course #860.1

Grade 9 – Required for all 9th grade-paired with Phys. Ed. 9

Credit: .50

Students will explore technology tools and refine computer skills that are essential for academic, personal and career success. The content of this course includes but is not limited to electronic research methods; communication skills including speaking, listening, writing, and telecommunication; multimedia presentation skills; ethical considerations related to technology; and emerging technologies affecting academic, personal career environments. Project topics to include careers, technology, study skills, 21st century skills, and cross-curricular learning.

Information Technology & Society-Penn College Now

Course #805.1

Grades 10, 11 & 12 (Suggested 10th grade)

Credit: 1.0

Must pass Penn College Placement Test to earn college credit

Introduction to the basic concepts and applications of computer and internet-related information technology and its impacts on individual users, businesses, groups, organizations, and society. Topics include access, evaluation, and use of digital information, ethical and security implications of information use and storage, human-computer interactions, social aspects of information systems, economic and legal issues; and professional presentation and communication of information. Information literacy skills that promote lifelong learning are developed through exposure to various existing and emerging technologies, including information resources, communication methods and technology.

Pennsylvania College of Technology credits may be earned upon successful completion of this course.

Sports and Entertainment Marketing (SEM)

Course #803.1

Grades 10, 11 & 12 (Suggested 10th)

Credit 1.0

This course is designed to teach the basics of marketing including advertising, sales, event marketing and communications. The business of entertainment, including movies, concerts, theme parks, and sporting events have a tremendous impact on our economy and provide many career opportunities. These activities are global in their reach and impact. Sports marketing is a growing division of the marketing field that focuses on the business of sports and the use of sports as a marketing tool. This class will provide students with an over-view of the sports and entertainment field from a business and marketing perspective.

Introduction to Business-Penn College Now

Course #801.1

Grades 10, 11 & 12

Credit: 1.0

Introduction to a variety of business concepts and practices that impact all organizations, as well as the knowledge and skills needed to be successful in an organization. Topics include interpersonal communications, emotional intelligence, economics, accounting, and finance and investments. An integrative approach connects topics and provides context within organizational environments, relevance to current business situations, and advances across various fields of business. **Pennsylvania College of Technology credits may be earned upon successful completion of this course.**

Accounting 1

Course #901.1

Grades 10, 11 & 12

Credit: 1.0

This course is designed to enable a student to independently work through an accounting cycle from analyzing transactions to preparing a post-closing trial balance. Students are instructed in the following areas: accounting concepts, accounting ethics, journalizing transactions, posting, and preparation of work sheets and financial statements. A chapter in banking is also included. Students will learn to write checks, prepare deposit slips, and reconcile the checkbook and bank statement. Students will demonstrate their acquired accounting abilities by completing required business simulations and various other projects throughout the semester. Students entering the accounting course should possess good math skills, organizational skills, and a liking for detail work.

Financial Accounting-Penn College Now (offered 2nd semester)

Course #903.1

Grade 10, 11 & 12

Credit 1.0

Recommended Prerequisite: Minimum grade of 80% in Accounting 1 and passing Penn College reading placement test.

ACC 113: Introduction to financial Accounting

Basic principles and application of financial accounting for business students. Preparation and interpretation of financial information are emphasized. Course work provides the accounting knowledge necessary for success in more advanced accounting courses and in the business field.

Upon successful completion of this course three college credits will be earned.

**L.I.F.E. (Law, Investment, Financial Education)
Grades 11 & 12**

**Course #809.1
Credit: 1.0**

This course provides basic knowledge of our legal and financial environment and helps facilitate understanding of the laws that govern human conduct in a civilized society. The law portion of the course will include topics such as consumer law, the court system, civil and criminal law, rights and duties of minors and parents, contracts, employer/employee relationships, and landlord/tenant laws.

The financial portion of the course will emphasize budgeting, saving and investing, as well as developing an understanding of stocks, bond, mutual funds, and other investment terminology. To reinforce learning, students will play the Stock market Game. In addition, students will also learn about credit cards, credit scores, and identity theft. They will also learn the importance and benefits of building a good credit history. This course is designed to provide the student with a valuable and practical foundation to benefit them in everyday life situations.

Career and Technical Education

**Automotive Technologies I
Grades 10, 11 & 12**

**Course #931.1
Credits: 3.0**

**Automotive Technologies II
Grades 11 & 12**

**Course #933.1
Credits 3.0**

**Automotive Technologies III
Grade 12**

**Course #935.1
Credits 3.0**

These courses are designed to develop the student's knowledge and skills in all areas of automotive repair. The student will have intensive theory and hands-on shop experience in the following areas: automotive careers and certifications (SP2, Section 609, PA Safety Inspection) hand power and measuring tools, shop safety, engine rebuilding, fuel, electrical and cooling systems. Heating and air-conditioning systems, emission control systems, automotive drive train, tire and wheel service, and computerized, high-speed balancing equipment. Students will practice their skills on actual vehicles under close supervision from the instructor. Students will learn how to use the computerized shop manuals and locate repair procedures, wiring diagrams, service bulletins, and recall information from dealerships and manufacturers; also, how to write work orders and inventory systems. The student will be trained on how to use the alignment machine, brake lathe, tire balancer/changer along with classroom theory. The advanced student will also be educated on how to pass the Pennsylvania State Inspection license test, both written and practical sections, and opportunity to earn a Pennsylvania Skills Certificate for high performance on the exit (NOCTI) exams. This test is state mandated and is given after school hours by professionals from industry. Students must achieve a 70% or higher in the 1st level in order to advance to the 2nd and 3rd levels. This course meet for 1-2 blocks each day.

Construction Trades 1
Grades 10, 11 & 12

Course #921.1
Credits 3.0

Construction Trades 2
Grades 11 & 12

Course #923.1
Credits 3.0

Construction Trades 3
Grade 12

Course #925.1
Credits 3.0

Major Areas of Study: Masonry, Carpentry, Residential Electricity, Residential Plumbing (some HVAC and introductory welding overview may be possible). Safety Training is integral to all areas. The purpose of this program is to provide its graduates with the safety training and specific knowledge, skills, and employability attributes needed to gain entry-level employment in the residential and light commercial building construction occupations with a competitive edge over untrained job seekers. First year students will train Block one. Second and Third year students will receive instruction during Block 4 due to off-campus training. Live work sites are the most effective training venue and shall be used whenever possible. The instructor chooses work sites primarily on the basis of the students' training needs. School and Community work has first preference if program needs are met. Mechanical aptitude and geometry skill are especially helpful. Math skill are essential. This course is physically demanding at times in terms of lifting, climbing, balancing, etc. The instructor shall not be responsible for incidents resulting from students who fail to disclose limiting conditions which may compromise student safety. Employability attributes such as attendance, safety, and personal management skills comprise ½ the grade. The balance of the grade shall be earned from ¼ performance and ¼ knowledge tests. The fully completed three-year program yields 9 graduation credits and the opportunity to earn a Pennsylvania Skills Certificate for high performance on the exit (NOCTI) exams. After completing this course many colleges are available for those intending to further their education.

Advanced placement is available at some colleges and dual enrollment credits (see below) are available through Pennsylvania College of Technology. Students must achieve a 75% or higher in the 1st level in order to advance to the 2nd or 3rd levels. This course meet each day for two blocks first semester and pride time and one block second semester.

Construction Hand and Power Tools

Course #BCT103
Credit 1.0

Survey of hand and power tools typically used to perform construction work. Emphasis on the development of skills needed to effectively perform layout, measurement, cutting, fastening, and finishing operation. Study also includes maintenance of tools and equipment, safe use of hand and power tools, and emerging tool technology. (0 Lectures-3 Labs)

Framing Principles

Course #BCT109
Credits 4.0

Co requisite(s): BCT102 and BCT103 or BCT103 and BCT10

Theory and applications of framing techniques in residential and light commercial. Emphasis on basic principles and skills used in hand and machine woodworking operations. (2 Lectures-6Labs)

Drafting 1
Grades 10, 11 & 12

Course #911.1
Credits 3.0

Drafting II
Grades 11 & 12

Course #913.1
Credits 3.0

Drafting III
Grade 12

Course #915.1
Credits 3.0

These courses are designed to provide students with a broad and a thorough knowledge of the drafting trade. Instruction in this course includes the use of tools, instruments, and equipment that are used to produce technical drawing and sketches. Emphasis is placed upon the knowledge of materials, machines, and methods and the use of handbooks used in the drafting field. Along with basic skills and knowledge of drafting, students will have an opportunity to become familiar with the responsibilities that must be assumed in industry, along with the various working conditions and environments what will be encountered on the job. Students will also be applying math, English, industrial processes, applied geometry, and commercial practices to many of their projects and assignments. The course specializes in mechanical drafting and is designed to suit the student's capability. All student will work with the computers using the Auto CAD program. The advanced students will also be introduced to architectural drafting, architectural CAD, architectural model building, structural drafting and 3d solid modeling. Third year completers of the program will be required to complete an exit exam and have the opportunity to achieve a Pennsylvania Skills certificate. After completing this course many colleges are available for those intending to further their education. Advanced placement is available at some colleges and 16 dual enrollment credits (see below) are available through Penn College of Technology. Students must achieve a 75% or higher in the 1st Level in order to advance to the 2nd or 3rd levels. This course meets each day for one block first semester and two blocks second semester.

ACH135 - Architectural Computer Aided Drafting

Introduction and practical application of Computer-Aided Drafting (CAD) techniques and standards used to create two-dimensional architectural drawings. Focus on hardware and software components, operating systems, file management, CAD commands, system variables, drawing setup, creation of lines and shapes, and the editing saving, and printing of drawings. Advanced topics include external references, layouts, paper space, attributes, dimensioning, text, and the creation of a symbols library. (Formerly ACH116/ACH118 combination) 3 Credits (2 Lecture – 3 Lab).

CAD 120-Auto CAD-Comprehensive

Comprehensive application of 2D and 3D techniques using AutoCAD* software. Topics include the generation, editing, and analysis of geometry in alignment with industry standards with an emphasis on productivity. (Formerly CAD118) 3 Credits (2 Lecture-3 Lab)

CAD122 – 3D Parametric Modeling Using Autodesk Inventor (R)

Study and application of solid and surface modeling using Autodesk Inventor* parametric modeling software. Topics include the generation and editing of mechanical parts and assemblies, analysis of mass properties, rendering and animation, and the development of physical models using rapid prototyping (additive manufacturing) equipment. Also included are basic 3D-to-2D documentation techniques. (Formerly CAD 119) 3 Credits (2 Lecture – 3 Lab)

CCD103 – Technical Drawing 1

Basic principles and skill of drafting as a graphic using the parametric modeling approach. Topic include technical sketching, SolidWorks* CAD operations and procedures, shape description, geometric construction, multi view projection, sectional views, auxiliary views, revolutions, threads and fasteners, and application of dimensions and toleranceing. Other topics include detail views, part drawings, assembly drawings, manufacturing processes, surface finishing, descriptive geometry, and the use of vendor part catalogs. ANSI/ASME drawing standards and practices are emphasized. (Formerly CCD101) 4Credits (3 Lecture–3 Lab)
 Co-requisite(s): CCD104

CCD104 – Detailing 1

Technical drawing procedures using SolidWorks* CAS operations in compliance with the ANSI standards to develop finished drawings. Drawing assignments involve technical sketching, shape description, geometric construction, multi view projection, sectional views, auxiliary views, revolutions, threads and fasteners, application of dimensions and tolerancing, detail views, part drawings, and assembly drawings. Other topic will include manufacturing processes, surface finishing, descriptive geometry, and acquiring and using vendor catalogs. ANSI/ASME drawing standards and practices are emphasized. (Formerly CCD102) 3 Credits
(0) Lecture – 9 Lab) Co-requisite(s): CCD103.

Early Childhood Education 1
Grades 10, 11 & 12

Course #941.1
Credits: 3.0

Early Childhood Education 2
Grades 11 & 12

Course #943.1
Credits: 3.0

Early Childhood Education 3
Grade 12

Course #945.1
Credits: 3.0

The Early Childhood Education courses are designed to prepare students for careers in child care, teaching, and other careers involving young children. Emphasis is placed on understanding children and applying that knowledge while providing childcare or teaching. Topics include child development, developmentally appropriate practices and activities, health, safety, guidance, nutrition, and administrative skills. Students will have the opportunity to interact with young children in a preschool setting on a regular basis. Students will be required to obtain a child abuse clearance and a criminal record clearance at their expense. They will also be required to have a physical and a TB test; this will be done through the school. Both will also need to be completed prior to working with children. Students have the opportunity to earn a Pennsylvania Skills Certificate for high performance on the exit (NOCTI) exams. This test is state mandated and is given after school hours by professionals from industry. After completing this course many colleges are available for those intending to further their education. Advanced placement is available at some colleges and dual enrollment credits (see below) are available through Pennsylvania College of Technology. Students must achieve a 75% or higher in the 1st Level in order to advance to the 2nd or 3rd levels. This course meets for 1 ½ blocks each day.

Criminal Justice 1 (new program for 2017-2018)
Grades 10, 11, 12

Course #981.1
Credits 3.0

A program that prepares individuals to perform the duties of police and public security officers, including patrol and investigative activities, traffic control, crowd control and public relations, witness interviewing, evidence collection and management, basic crime prevention methods, weapon and equipment operation and maintenance, report preparation and other routine law enforcement responsibilities. This course meets for 1-2 blocks per day for the duration of the school year.

Technical Education/Computers

High Tech Lab
Grades 9, 10, 11 & 12

Course #850
Credit: .50

This course is designed to give students a basic foundation in engineering/drafting and computer aided drafting and design (CADD). Instruction in this course includes communication, basic sketching and the importance of precision and attention to detail. The course emphasis however is centered on the AutoDesk Inventor program and CADD. Students will learn the basics of this program, which will provide them with a skill set ready for further study in the engineering world. This course meets for 90 minutes a day for 9 weeks. This is an introductory level class and has no prerequisite but it has to be taken in conjunction with Intro to Wood. It cannot be taken as a stand-alone class

Introduction to Woodworking
Grades 9 & 10

Course #961.1
Credit: .50

This course provides students an opportunity to learn the basics of wood working, measurement, reading plans and basic tool use. Safety practices are emphasized and students will manufacture 3-4 teacher-selected projects.

Woodworking 1
Grades 10, 11 & 12
No pre-requisite

Course #963.1
Credit: 1.0

This course places emphasis on foundational skills as they pertain to woodworking. Power tools and machinery are central components as well as a wide variety of woodworking techniques and joinery methods. Students have a variety of differing wood types and finishes to choose from in order to manufacture 4 teacher selected projects. Customizing projects is allowed to a small degree.

Woodworking II
Grades 10, 11 & 12

Course #965.1
Credit 1.0

Pre-requisite: Minimum grade of 75% in Woodworking 1

Woodworking 2 is an intermediate level course devoted to the manufacture of at least two major projects. One selected by the teacher the other by the student. Students have a high degree of freedom to customize and individualize all of their projects. More advanced joinery and woodworking techniques are introduced as well as additional wood types to choose from.

Woodworking III
Grades 10, 11, & 12

Course #967.1
Credit 1.0

Pre-requisite: Minimum grade of 85% in Woodworking 2

Woodworking 3 is an advance course of independent study. Students have complete freedom to choose and develop their own projects to include plans, joinery, wood type and customization. Self-motivation is key as the student is the driver of all the work and the teacher is more of a resource and sounding board.

Woodworking IV
Grades 11 & 12

Course #969.1
Credit 1.0

Pre-requisite: Minimum grade of 85% in woodworking 3

Woodworking 4 is an advance course of independent study that allows students to further their woodworking skills learned in woodworking 3. Students have complete freedom to choose and develop their own projects to include plans, joinery, wood type and customization. Self-motivation is the key as the student is the driver of all the work and the teacher is more of a resource and sounding board.

Car Care
Grades: 10, 11 & 12
Credit: 1.0

Course #937.1

This course is designed for students that are interested in understanding their automobiles: the technologies underlying the car's major systems, the basics of inspection and maintenance, and the financial aspects of owning and operating an automobile. This course would be recommended, but not a required prerequisite for Automotive Technology. Students will be taught the technologies underlying the car's major systems, the basics of inspection and maintenance, and the financial aspects of owning and operation an automobile. Small Engine covers the fundamentals of small engine repair and servicing. After learning what makes two-cycle and four-cycle engines work, students in this course will get a hands-on, guided experience disassembling a small engine. This course meets 1 block per day.

Technical Drawing 1
Grades 9, 10, 11 & 12

Course #971.1
Credit 1.0

This course is designed to prepare each student in basic blueprint reading. We study mechanical drawing and blueprint reading so that we can not only make accurate drawings of our own but also understand the drawings of others. By applying the basic rules and making good projection drawings, we can show other people exactly what we want to make our build. Technical Drawing will help students learn to visualize in three dimensions, to develop and strengthen their technical imagination, to think precisely, to read and write the language of industries and to gain experience in making working drawings according to modern commercial practice. Computer-aided drafting will be used on some of the basic projects. Basic architectural drawing of floor plans is also part of this course. This course meets every day for one semester.

Technical Drawing II
Grades 10, 11 & 12

Course #973.1
Credit 1.0

Technical Drawing 2 is an advanced course open to students who have completed Technical Drawing 1. The course is designed to prepare the students in advanced mechanical drawing preparation and advanced blueprint reading. Advance computer-aided drafting will be used on 85% of the drawing projects. This course meets every day for one year.

Technical Drawing III
Grades, 11 & 12

Course #975.1
Credit 1.0

Technical Drawing 3 is an advance course open to students who have completed Technical Drawing 2. The course is designed to prepare the students in advanced mechanical drawing, advanced blueprint reading, basic architectural drawing, architectural model building and architectural computer project. Advanced computer-aided drafting, will be used on 99% of the drawing projects. This course meets every day for on semester.

Technical Drawing IV
Grade 12

Course #977.1
Credit 1.0

Technical Drawing 4 is an advance course open to students who have completed Technical Drawing 3. The course is designed to prepare the students in advanced mechanical drawing, advanced blueprint reading, advance architectural drawing and model building, and 3D solid Modeling. This course meets every day for one semester.

Introduction to Adobe Photoshop A
Grades 9, 10, 11 & 12

Course #841.2
Credit: .50

Adobe Photoshop is a powerful application for color painting, photo retouching, and image editing. This program is commonly used by graphic designers, multimedia specialists, videographers, and Webmasters to create compelling images for print and/or electronic distribution. This class will cover image basics, Photoshop's work area, modifying images with selection tools, how to work with layers, masks and channels, photo retouching, pen tool techniques, creating special effects, along with how to use printers, scanners and digital cameras. Grades for this course will be based on completing required class assignments, tests and daily productivity.

Programming in C++ and HTML A
Grades 9, 10, 11 & 12

Course #845.2
Credit: .50

The class will give the student an overview to the basic principles of programming and is recommended to any student wishing to seek a computer science degree in post-secondary school. To achieve this overview, the instructor will make use of the following computer languages: C++ and HTML. Students will be expected to acquire a working knowledge of machinery, the C++ and HTML computer languages and write various programs. Career options, software, evaluation, and a historical overview will be presented throughout the semester.

Programming in Visual Basic A
Grades 9, 10, 11 & 12

Course #847.2
Credit: .50

The class will give the student an overview to the basic principles of programming and is recommended to any student wishing to seek a computer science degree in post-secondary school. To achieve this overview, the instructor will make use of the following computer language: Visual Basic. Students will be expected to acquire a working knowledge of machinery, visual basic computer language and write various programs. Career options, software, evaluation, and a historical overview will be presented throughout the semester.

Desktop Publishing A
Grades 9, 10, 11 & 12

Course #823.2
Credit: .50

This class will introduce the workings of a Macintosh computer and the application of desktop publishing software. The course will focus on two pieces of software: Adobe InDesign and GoLive. InDesign will be used to create and publish printed materials. GoLive will be the tool for creation of electronic media. Students will learn about production of published materials such as brochures, magazines, journals, yearbooks, and web pages. Students will also be instructed in the operation of a scanner and digital camera, and how to place captured graphics into documents. Some PhotoShop skills will be introduced along with the incorporation of multimedia in web pages.

School Publications
Grades 10, 11 & 12

Course #821.2
Credit: 1.00

Recommended Prerequisite: 85% in Advanced Publishing & Design. It is also recommended that students have completed Introduction to Adobe Photoshop and Introduction to Graphics & Multi-Media.

This class will be responsible for the creations of school publications (yearbook, playbills, and WebPages). Students will use class time, advanced programs, and research to create written and graphic materials for the student body, administration, sports teams, clubs, and staff. Students will have to meet deadlines and create a project of their own to be completed upon the instructor's review. Students in School Publications and Journals 2 will have managerial and editing responsibilities.

Introduction to Computer Graphics & Multi-Media
Grades 9, 10, 11 & 12

Course #843.2
Credit: .50

Introduction to Computer Graphics & Multi-Media is an instructor led survey course designed to spark interest in various computer software and prepare that student for advanced study in High-Tech Lab 1. Students will work on numerous pieces of software for a period of 3 to 4 weeks giving the student the opportunity to study 4 to 5 pieces of software. Course content emphasis is on graphics for print and multimedia. Topics include 2D and 3D graphics, animation, video editing, website construction, and current computer topics.

Advanced Publishing & Design
Grades 11 & 12

Course #825.2
Credit: .50

Recommended Prerequisite: 85% in Desktop Publishing. It is also recommended that students have completed Introduction to Adobe Photoshop.

This class will provide education in design, graphics, and the process to create a multi-page document. Building on the skills learned in Desktop Publishing students will learn to process leading to the creation of a yearbook and playbook. The focus of the class will be the Jostens Yearbook Curriculum.

Introduction to Gaming and Simulation-Penn College Now
Grades 11 & 12

Course #849.2
Credit: 1.0

Introductory topics include gaming industry history, game development processes, game genres, storyboarding, game environment, character design, interface design, game play, AI, the psychology of game design, and professionalism. Study provides overall view of the gaming and simulation components. Practical hands-on application includes using a simple game design environment to design and write simple games. (Students have the option to take this class for 3 college credits through the Pennsylvania College of Technology. Students electing to do this must pass the Pennsylvania college of Technology Achievement Test.

Family and Consumer Science Electives

Prerequisite: All students must take Nutrition Food and Wellness and pass with a 72% or higher before taking any other food related courses.

Nutrition Food and Wellness
Grades 10, 11 & 12

Course #785.2
Credit: .50

This course is an introduction to the basic principles of nutrition, wellness, and food preparation. The focus of the course is centered on healthy food and lifestyle choices. The general goal is to enhance student awareness in regards to personal food choices and physical activity. The overall goal for all levels of the foods program is to enhance student knowledge of food choices and to motivate students to actually improve their choices.

Prerequisite: All students must take Nutrition Food and Wellness and pass with a 72% or higher before taking any other food related courses.

Baking and Pastry Arts
Grades

Course #787.2
Credit: 1.0

Baking & Pastry Arts prepares you for successful careers as baking and pastry professionals through building a strong foundation of principles and skills, and then using specific applications and recipes. Once these techniques are understood and practiced, you will be able to prepare a wide array of baked goods, pastries, and confections. Students will also explore gluten-free baking recipe planning and preparation, as well as altering and preparing recipes to address other allergies and/or dietary restrictions.

Prerequisite: All students must take Nutrition Food and Wellness and pass with a 72% or higher before taking any other food related courses.

**Regional and Foreign Foods
Grades 10, 11 & 12**

**Course #789.1
Credit: .50**

Prerequisite: Successful completion or current enrollment in Introduction to Foods

This course is designed to further the educational memories of a student by studying the foods of the regions of the United States and of selected countries. Students will design and lead presentations for the regions and countries selected. Food history, preparation, geography and culture are integral parts of this course. Notebooks made into cookbooks are mandatory for this course.

**EDU100 – Child Development
Grades 9, 10, 11, 12**

**Course # 946.1
Credit 1.0**

Overview of typical growth and development of young children from birth to age eight. Cognitive, language, Physical growth, gross and fine motor, emotional and social developmental milestones are the focus of this course, with a special emphasis on the implications they have for the care and education of young children. Other topics include an introduction to the basic concepts of major developmental theories; principles of learning and development; and developmentally appropriate practice. A strong focus on a family-centered approach is integrated throughout the course.

Foreign Language Electives

**French 1
Grades 9, 10, 11 & 12**

**Course #611.2
Credit: 1.0**

French 1 introduces students to the structure of the French Language, and uses a variety of resources including a textbook to help students master basic concepts of the French language. Instruction is presented in both French and English while students learn vocabulary, grammar, and culture. All students will apply reading, writing, listening and speaking skills in the classroom. Approximately eight chapters of the textbook are covered in the program along with varied extra activities. Vocabulary lessons include greeting and feelings, introducing oneself, describing people and things, expressing likes/dislikes, telling time, talking about school and describing family and where one lives, traveling in and around France and Canada. Grammar lessons include sentence structure, regular and irregular verbs in the present tense, and adjective agreement. Culture lessons include French geography, greetings, social customs, friends, school environment, families, housing, and taking trips.

**French 2
Grades 10, 11 & 12**

**Course #613.2
Credit: 1.0**

Recommended Prerequisite: Minimum grade of 75% in French 1

French 2 is a continuation what was introduced in French 1. Students will further their knowledge and present tense verbs and will begin using verbs in the past tense. They will also learn about direct, indirect, and reflexive pronouns. Instruction is presented frequently in French, and students are expected to use French as much as possible while applying reading, writing, listening and speaking skills in the classroom. Approximately 10 chapters of the textbook are covered in the program along with varied extra activities. Vocabulary lessons include sport/activities, fashion and shopping, daily routine, health and fitness, travel and hotels, banking. Grammar lessons include regular and irregular verbs in the present tense and in the passé compose, reflexive verbs, adjective placement/agreement/comparative/superlative, passé compose. Culture lessons include the importance of food and fashion industries in France, and popular sports and activities in France, roles of hotels, banks, post offices.

**French 3
Grades 11 & 12**

**Course #615.2
Credit: 1.0**

Recommended Prerequisite: Minimum grade of 75% in French 2

French 3 builds on everything learned in French 1 and 2. Students will continue using verbs in the present and past tenses, but will also learn the imperfect, and they will work regularly with direct and indirect object pronouns. Instruction is presented mostly in French, and students are expected to use French consistently while applying reading, writing, listening and speaking skills in the classroom. Approximately eight chapters of the textbook are covered in the program along with varied extra activities. Vocabulary lessons include post office, daily life, telephones, travel, and hospitals. Grammar lessons include regular and irregular verbs in the present tense, passé compose, imparfait, future, reflexive verbs in the past tense, and direct and indirect pronouns. Culture lessons include the roles of post offices, and telephones in the daily lives of the French, and making comparisons with those in the daily lives of Americans, travel to places where French is spoken.

French 4 H
Grade 12

Course #617.3
Credit: 1.0

Recommended Prerequisite: Minimum grade of 75% in French 3

The French 4 builds on everything learned in French 1, 2 and 3. Students will continue using verbs in the present, past and imperfect tenses, but will also learn the future, conditional. Subjunctive and passé simple. They will work extensively with works of literature such as *Les Fables* by La Fontaine and *Le Petit Prince* by Antoine de St. Exupery. Instruction is presented in French, and students are expected to use French while applying reading, writing, listening and speaking skills in the classroom. Approximately eight chapters of the textbook are covered in the program along with varied extra activities. Culture lessons daily lives of people in France, the metro and bus, parties, school life, having a good time in France, other countries that speak French, life outside the city of Paris, and professions of people in France. Grammar lessons include the conditional tense, the subjective tense, more irregular verbs, and past tense in the subjunctive. Students will also do several projects and present them to the class, therefore, they are given a lot of choice as to what they would like to study.

Spanish 1
Grades 9, 10, 11 & 12

Course #601.2
Credit: 1.0

Spanish 1 is a course that introduces the student to the structure of the Spanish language. Culture is also incorporated throughout the year. Instruction is presented in both Spanish and English. This course uses a variety of resources including a textbook to help the student master basic concepts of the Spanish language. Students learn about various Spanish-speaking countries, vocabulary, grammar, and culture. Approximately six chapters are covered in the program along with varied outside activities. This course is designed for non-native Spanish speakers.

Spanish 2
Grades 10, 11 & 12

Course #603.2
Credit: 1.0

Recommended Prerequisite: Minimum grade of 75% in Spanish 1

This course is a continuation of the level 1 book, *Ven Conmigo*. Students will further their knowledge of present tense verbs and will begin using verbs in the past tense. They will also learn about direct, indirect, and reflexive pronouns. Vocabulary lessons will include the home, making and accepting invitations, food and drink, holidays and the human body. Students will use reading, writing, listening and speaking skills in the classroom, while gaining more information on Spanish culture. Spanish will be spoken frequently in class.

Spanish 3
Grades 11 & 12

Course #605.2
Credit: 1.0

Recommended Prerequisite: Minimum grade of 75% in Spanish 2

Students will continue in the *Ven Conmigo* series, this year in the level 2 book. They will build upon their knowledge of grammatical structures, including past tense verbs, making requests, and using pronouns. They will also use vocabulary relative to the family, places around town, weather, the school, etc. Students will continue to develop their speaking, writing, reading, and listening skills, and they will learn more about the Hispanic culture. Spanish will be spoken frequently in class.

Spanish 4 H
Grade 12

Course #607.3
Credit: 1.0

Recommended Prerequisite: Minimum grade of 80% in Spanish 3

Students will continue in the *Ven Conmigo* series and will complete the level 2 book this year. They will build upon their knowledge of grammatical structures and will increase their collection of vocabulary. Students will continue to develop their speaking, writing, reading, and listening skills, and they will learn more about the Hispanic culture. Various projects, reading assignments and writings will be included in the curriculum. Spanish will be spoken daily and students will be expected to ask questions and respond almost entirely in Spanish.

IEP Electives

Beyond the Horizon Grades 11 & 12

**Course #981
Credit: .50**

This course must be scheduled through the IEP Process

This course is designed to help students prepare to live on their own. They will develop new skills based on their current knowledge by making connections between the real world and the skills that are taught in this curriculum. The course will cover many topics including decision-making, goal setting, peer interactions, community service, self-advocacy, problem solving techniques, and current events.

Enrichment Grades 9, 10, 11& 12

**Course #2901.1
Credit: .50**

This course must be scheduled through the GIEP Process

This course is designed to satisfy the needs to gifted learners who maintain the capacity to learn at faster rates, more in-depth and with greater complexity; the capacity to find, solve, and act on problems more readily; and the capacity to manipulate abstract ideas and make connections.

Music and Theater Arts Electives

Theater Arts 1 Grades 9, 10, 11& 12

**Course #501.1
Credit: 1.0**

The purpose of this course will be to expose students to the varied methods of stagecraft used in theater. Focus will be on acting and directing as well as some other technical skills, such as lighting, set design, costuming, and makeup. Study will focus on Modern American Plays and Playwrights, as well as American musical theater.

Theater Arts 2 Grades 10, 11 & 12

**Course #502.1
Credit: 1.0**

Recommended Prerequisite: Minimum of 85% in Theater Arts 1

Theater Arts 2 will be a continuation of Theater Arts 1, but will be performance-based. Emphasis will be placed on utilizing all aspects of the Theater Arts to put together performance pieces for various forums. The history of theater, as well as musicals and dance, may also be explored.

Guitar Grades 9, 10, 11& 12

**Course #525.1
Credit: 1.0**

This course will provide students with instruction in playing and maintaining the guitar. The student will learn note, rhythm reading, melodies, and chord accompaniment. Past musical or guitar training is not required. The class will make extensive use of tablature ("tabs") notation to teach and read music. Guitars are available for classroom use, but must remain in the building. Class size is limited to 12 students.

Guitar II Grades 10, 11 & 12

**Course #977
Credit: .50**

This course is an advanced study of the Guitar. This course builds on the foundation which was laid in Guitar I. The focus will be on using scales, playing and writing melodies, and applying basic and advanced chords in creating harmony. Students will demonstrate chord substitution and chord-to-scale relationships. Students will build a repertoire of songs that is supported by the theory presented in class.

Instrumental Music – Band Grades 9, 10, 11 & 12

**Course #523.2
Credit: 1.0**

Students will participate in music for a concert band experiences. Students will be given the opportunity to study solo, small ensemble, and popular and standard concert band literature. Band members will have the opportunity to attend small group lessons or sectionals where they develop skills, technique and knowledge necessary to play their instruments. Students are required to attend the holiday concert, spring concert, graduation and other performance opportunities as presented.

Senior High Concert Choir
Grades 9, 10, 11 & 12

Course #531.1
Credit: 1.0

Concert Choir is a non-auditioned choral ensemble for students interested in learning and singing a diverse repertoire of choral music. Emphasis will be placed on correct singing techniques, and the skills and knowledge necessary to make music a life-long pursuit. Opportunities for solo work and smaller ensembles will also be offered. Students will be required to attend and perform at a minimum of 3 concerts per year, as well as Baccalaureate and Graduation and vocal labs (sectionals) each marking period.

Band / Senior High Concert Choir Combo
Grades 9, 10, 11 & 12

Course #521.1/533.2
Credits: .50 (each)

Musicality I
Grades 10, 11 & 12

Course #541.1
Credit: 1.0

In the Musicality I course, students will learn the basics of music theory, aural theory and ear training, vocal techniques and piano skills. They will begin to recognize, read and write scales, chords, intervals, harmonic progressions, parts of the vocal structure, and solfeggio. The emphasis will be on skills needed to become a better musician. Length of instruction will be 135 hours. (7.5 hours per week over one semester)

Musicality II
Grades 10, 11 & 12

Course #543.1
Credit: 1.0

IN the Musicality II, students will continue to hone their skills in theory, both written and aural, more advanced vocal and piano techniques, and more in depth harmonic structure. They will use a combination of written, played and sung examples, as well as listening. Length of instruction will be 135 hours.

Social Science

Psychology
Grades 11 & 12

Course #471.2
Credit: 1.0

The purpose of this course is to give students an overview of general psychology. The course will include a history of psychology, contemporary perspectives, research methods, methods of observation, and case studies. The sciences of biology and chemistry will be linked to psychology through other topics which will include sensation and perception, states of consciousness, learning, abnormalities, and psychological disorders. This course will also briefly cover human development from infancy to adulthood, and gender roles and sexuality. Throughout the course, the theories of Freud, Erikson, Piaget, Chodorow, and Gilligan will be examined.

AP Psychology
Grades 11 & 12

Course #491.4
Credits: 1.50

This course will provide students with an in-depth view of psychology. It is primarily designed for students who are considering a major in any branch of psychology, education, social work, counseling, therapy, or psychiatry. Some of the topics covered in the class will include states of consciousness, intelligence, addiction, research methods, genetics, abnormalities, psychological disorders, rare human disorders, life span development, personality theory, emotions, gender roles, and human sexuality. The course will also examine the theories of Watson, Jung, Skinner, Freud, Erikson, Piaget, Chodorow, and Gilligan. The course is the equivalent of a college level course in general psychology. Students are expected to take the Advanced Placement Test near the end of the school year.