

# Montgomery Area Senior High School



## *Curriculum Guide* *2019-2020*

Mrs. Bowers - Superintendent  
Mr. Stoudt – Jr./Sr. High School Principal  
Mrs. Bozella – Director of Student Services  
Mrs. Liscum – School Counselor

# *Curriculum and Instruction*

The Montgomery Area School District is committed to providing a rewarding, rigorous and relevant educational experience necessary for future success in the workplace and post-secondary education.

Our School to Work initiative is designed around career planning, career technology clusters, internships and relevant academics. A balance has been reached between occupational and academic skills, which is a result of planning based upon the changing nature of the American work force.

Our curriculum is standards based and our staff is committed to research proven best practices in education. Results of standardized tests have shown The Montgomery Area School District to be one of the highest performing school districts in Pennsylvania.

We are proud of this distinction, as it is the result of hard work and planning by all who are connected to the district. Our curriculum is reviewed and appropriate revisions are made on a consistent basis. Assessment is continuous and is aligned with Pennsylvania Academic Standards.

Students will complete course requests using the student portal in SIS, but may need to meet with Mrs. Bozella and/or Mrs. Liscum in order to complete their 2019-2020 schedules. Teachers will provide their advisee with sufficient information regarding their future plans and will help each student build an appropriate schedule. No course selection sheet will be accepted without the proper teacher signatures.

**Parents and students are to be advised that performance on State assessments (PSSA and Keystone) will directly impact the courses that a student may take in any given year.**

Colleges and universities, technical institutes, community and junior colleges, and the military all have unique expectations for entrance, making scheduling an important component of the educational process. Although a high school transcript will rarely be the sole determinant for admission, it could be a deciding factor in a competitive entrance situation.

Questions regarding this curriculum guide, graduation requirements, or the scheduling process should be directed to Mrs. Bozella and Mrs. Liscum.

## **EQUAL OPPORTUNITY STATEMENT**

**The Montgomery Area School District declares itself to be an Equal Rights and Opportunities School District. As an Equal Rights and Opportunities School District, it does not discriminate in employment, programs, services, or activities based on race, color, national origin, sex, religion, age, or handicap, in accordance with State and Federal laws, including Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, Title VI of the Civil Rights Act of 1964, and the American Disability Act of 1990. Inquiries should be directed to: Montgomery Area School District, 120 Penn Street, Montgomery, PA 17752. (570) 547-1608.**

## **Mission Statement**

The mission of the Montgomery Area School District, as the leader of an educational partnership with the community, is to ensure that all students will become independent learners, will acquire respect for self and others, and will attain the knowledge and skills needed to become successful, productive members in the ever changing global community.

## **Programs of Study**

To meet the demands of the ever-changing challenges of the twenty first century, we are committed to offering all students those academic courses that prepare them for the world beyond high school. All students within the district are required to take core subject courses in math, English, science, and social studies to enable them to either enter the workforce or pursue post secondary education (now or at a later date). Their program of study is highlighted by electives in the tech prep program or the arts. These courses have a great practical benefit for all students regardless of future plans. In those cases where enrollment is limited in Career and Technical Education courses, preference will be given to students who have selected a related occupation for their career objective. Independent study is available in some instances with administrative approval. Students who are unable to schedule their first choice elective are encouraged to meet with the guidance counselor to make another selection.

To continually challenge our students, we offer several Advanced Placement courses for juniors and seniors and also dual enrollment opportunities through local colleges and universities. Honors classes are also available to provide rigor to our course selection.

For those students requiring additional support to meet high academic standards, we offer support through special education services & ESL services, as well as our remediation program. In addition, we use time as a variable to enable all students to attain high levels of success. By embracing the motto of doing “whatever it takes,” the Montgomery Area Senior Jr./Sr. High School meets the needs of all students.

## **Belief Statements**

Educators must be passionate about their subjects and compassionate toward students.

Educators embrace all aspects of professionalism and the “Montgomery Area School District”

Standards-Based Best Practices.

Effective educators set high expectations for all students.

Effective educators provide opportunities for all students to become high achievers.

All students possess the ability to learn.

All students possess a natural desire to learn.

Students learn best when the learning is relevant and interesting.

Students learn in different ways and at different rates.

Education is a professional learning community responsibility.

A community that values education prospers.

# *Graduation Requirements*

1. The graduation requirements of the Montgomery Area School District are consistent with the requirements set forth in Chapter 4 under Section 4.24. Students will be required to pass twenty-six (26) credits of academic study in the following areas:

Mathematics 4 courses

Science 4 courses

English 4 courses

Social Studies 3 courses

\*American History II and American Government are required.

Health 1 course

Physical Education 2 courses

Career & Technical Education and/or

Elective Area courses to fulfill the 26-credit requirement

2. Students must demonstrate proficiency in meeting standards as measured by the Keystone Exams. Proficiency level will be determined by the Pennsylvania Department of Education.
3. Students must successfully complete the Graduation Project: College and Career Readiness Portfolio in order to meet all indicators identified in the PA Future Ready Index.
4. **Criteria for grade promotion:**
  - Grade 9 – Grade 10: student must have earned a minimum of **5 credits**
  - Grade 10 – Grade 11: student must have earned a total of at least **12 credits**
  - Grade 11 – Grade 12: student must have earned a total of at least **19 credits**

## COURSE TYPES AND WEIGHTS

Montgomery Area High School utilizes a 100 point cumulative weighted average system. The following is a description of the identified course levels:

**Academic (Weight = 1.0)** Most of the coursework offered is considered an academic level. Academic courses are rigorous and will prepare any student for a comprehensive two or four-year college program as well as any other post-secondary career focus, including serving in our nation's military.

**Honors (Weight = 1.04)** These courses will be taught at an **accelerated level**. Such courses often require at least 1 hour minimum per night of extra study/homework completion. Students who seek such coursework must be organized and realize the work ethic required to be successful in such coursework. Like the academic courses, honors courses will also prepare any student for a comprehensive two or four-year college program as well as any other post-secondary career focus.

**Advanced Placement (AP) (Weight = 1.08)** AP courses are within a prescribed, scripted curriculum defined by the College Board. **AP courses are the most challenging/rigorous courses** which are applied to a student's rank and GPA. AP coursework requires students to be highly motivated, organized, and capable of spending 1-2 hours of extra study/homework completion per evening. **It is an expectation that students who choose to take AP coursework also take the requisite AP exam in May of the given school year.** It should be noted that the school district pays the entire AP exam cost for each student; therefore, there is no disadvantage to a student's taking the respective exam.

**Penn College NOW courses (Weight=1.08)** Penn College NOW courses are within the prescribed, scripted curriculum defined by the Pennsylvania College of Technology. Students who pass the Penn College placement exam may take these courses for both high school and post-secondary credit. Students are expected to be highly motivated, organized and willing to spend extra time on the coursework outside of the classroom.

**Bloomsburg University STEM (Weight=1.08)** The Montgomery Area High School also participates in the STEM program through Bloomsburg University. This program allows students to attend Bloomsburg University for a part of the day during their junior and senior year. There are three cohorts to which a student can apply: Technology, Engineering, and Health Sciences. These credits are offered at a reduced rate, ranging between \$700-\$930 per semester. A student successfully completing this program can earn up to 30 college credits prior to high school graduation.

# Mathematics

## **MA 107 – ALGEBRA I – 2.0 cr.**

Topics in this course include: integer work, solving equations, (both linear and quadratic), solving inequalities, working with exponents, radicals, monomials and polynomials, rational expressions and rational equations. Also included is work on what the graphs of the various functions look and how different portions of the problem affect the graph.

## **MA 108 GEOMETRY – 1.0 cr.**

This course gives you a strong background in the types of mathematical reasoning and problem solving that will be important in your future. The subject matter focuses on visualizing and analyzing geometric relationships in two and three dimensions, transformations, and similarity. Properties of various geometric figures will be investigated with emphasis on triangles. We will also develop inductive and deductive reasoning skills while investigating connections of geometry to algebra, probability and trigonometry. The student will have many opportunities to participate in the exploration of mathematical concepts, cooperative learning activities and small-group and whole-class discussions. We will continually develop a geometric system through the accumulation of various definitions, theorems and postulates. Many of the theorems will be proved by the deductive method, with emphasis on direct proofs, as well as an introduction to indirect proof.

## **MA 131 – HONORS GEOMETRY – 1.0 cr.**

This course is primarily mechanical in nature, however the student will encounter for the first time the concept of theoretical mathematics. Properties of various geometric figures will be investigated with emphasis on triangles. Transformations, measuring in two or three dimensions, similarity as well as an introduction to trigonometry will be included. The student will continually develop a geometric system through the accumulation of various definitions, theorems and postulates. Many of the theorems will be proved by the deductive method, with emphasis on direct proofs, as well as an introduction

## **MA 109 – ALGEBRA II – 1.0 cr.**

Algebra II begins with a review of key topics from Algebra I. These topics include writing, graphing and solving linear equations and inequalities, absolute value equations and inequalities evaluating functions. The topics that are covered in Algebra II are linear systems of two and three variable, quadratics, polynomial functions, complex numbers, exponential, logarithmic functions, radical and rational functions, probability, combinations, permutations, and graphical representations of data that include measures

of central tendency.

## **MA 113 –HONORS ALGEBRA II – 1.0 cr.**

Honors Algebra II will start off the year with a review of several topics from algebra I. These topics will include linear functions, system of equations, properties of Quadratic functions and Polynomials. These topics will be reviewed and then studied at a higher level. The course will then cover permutations, combinations, radical functions and rational exponents, exponential, logarithmic and rational functions. The course will finish the year with exploring conic sections, sequences, and matrices.

## **MA 132 – TRIGONOMETRY – 1.0 cr.**

This Trigonometry course introduces the student to basic trigonometry by employing a hands-on approach combined with class discussion, partner practice, independent practice and group work. The topics covered in this course include: right triangle trigonometry, oblique triangles, angles in the coordinate plane, the trigonometric functions, graphing the trigonometric functions, trigonometric identities, complex numbers, vectors in the plane, exponential and logarithmic functions, and sequences and series.

## **MA 135 – PRE-CALCULUS WITH TRIGONOMETRY – 1.0 cr.**

This course begins with a review of Algebra, called the Prerequisite Unit. This unit will include polynomials, equations, inequalities, graphs, and functions. Some time will be spent studying polynomial, rational, exponential, logistic and logarithmic functions, which will lead into a major unit on trigonometric functions.

The trigonometric functions will be defined in terms of right triangles and the rectangular coordinate system. Some of the topics will be: graphing the trig functions, trig identities, special formulas, trig equations and applications.

Analytic Geometry, in two and three dimensions, follows. The conic sections will be discussed in detail. Their equations and graphs are studied with emphasis on the general second-degree equation.

## **MA 136 – AP STATISTICS - 1.0 cr.**

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes:

1. Exploring Data: Describing patterns and departures from patterns.
2. Sampling and Experimentation: Planning and conducting a study.
3. Anticipating Patterns: Exploring random phenomena using probability and simulation.
4. Statistical Inference: Estimating population

parameters and testing hypotheses.

Students who successfully complete the course and exam may receive credit, advanced placement or both for a one-semester introductory college statistics course.

### **MA 137 - AP CALCULUS – 1.0 cr.**

There are two major areas of study in this course – Differential and Integral Calculus. These two topics are actually inverse operations with Differential dealing with rates of changes of functions. The course begins with a brief preview of Pre-calculus topics; a discussion on limits then leads into Differential Calculus.

Calculus is used as a tool for investigating many real world applications involving maximum and minimal values as well as rates of change of various functions. This course is the equivalent of a standard Calculus I course on the college level. Each student is required to take the Advanced Placement Exam in May. Based on the students score they could potentially receive college credit.

Each student will be provided with a TI-89 graphic calculator to use for the year.

### **MA 138 – STATISTICS – 1.0 cr.**

Designing, representing, processing, and analyzing data are activities of major importance to contemporary society. Students in this course will learn to transform data to aid in interpretation and prediction and test hypothesis using appropriate probability and statistics theory.

Students will be exposed to the use of probability and statistics in various fields, and learn to speak the language of probability and statistics as it is used to communicate to others. There are a variety of projects throughout the year that students will need to complete outside the classroom.

The course starts by describing and displaying distributions with graphs and numbers. Students will then look at normal distributions, correlations, linear regression, and relations in categorical data. Progression will be made into designing experiments, simulating experiments, probability, random variables, various distributions, and sampling distributions. The course finishes with inference with distributions, inference for proportions, chi squared procedures and inference for regression.

### **MA 140 – BUSINESS MATH – 1.0 cr.**

Business Mathematics is a course in which students learn to use mathematics effectively as a tool in their personal and business lives. Students will review and apply mathematical operations with whole numbers, decimals, fractions, ratios, and percentages. They will understand terminology and mathematics relating to gross pay, net pay, sales tax, banking services, loans and credit cards, comparative shopping, car and house buying, insurance, and investments. They will apply common mathematical formulas to solve a variety of personal and business mathematics.

### **MA 142 – REAL WORLD MATH APPLICATIONS – 1.0 cr.**

Real World Math Applications will prepare students for success in their careers as well as their everyday lives in the 21st century. The curriculum will be project and student-discovery oriented, giving students the opportunity to develop critical thinking skills and creativity in addition to thorough understanding of mathematical concepts. There will be a focus on exploring and implementing emerging technologies to improve computational, organizational, and communication skills as they relate to mathematics. Units of study will include proportions, measurement, conversions, area and volume, statistics, and properties of functions.



# Science

## **SCI 210 - BIOLOGY – 1.5 cr.**

Biology is designed to introduce high school students to the basic components of a high school biology course. Students will be introduced to a general survey of biological topics including the concepts of biochemistry, cells, genetics, evolution, ecology, and characteristics of organisms.

## **SCI 212 - BIOLOGY II - 1.0 cr.**

Biology II will reinforce the basic components of a high school biology course and help students prepare to re-take the Keystone Biology test.

## **SCI 213 – HONORS BIOLOGY – 1.5 cr.**

Honors Biology is designed to prepare high school students for the rigorous academic requirements of a college biology course. It is also designed for students wishing to take AP Biology in high school. Students will be studying, in depth, the concepts of biochemistry, cells, genetics, evolution, ecology, and characteristics of organisms.

## **SCI 214 – BIO-AG STEM – 1.0 cr.**

Bio-Ag STEM will apply Science, Technology, Engineering and Mathematics concepts to natural resources and agricultural-related activities. The course will be primarily project-based and is designed to introduce students to studies in water quality, soils, forestry, wildlife, horticulture, animal science, and food systems. We will also look at environmental issues such as climate change, deforestation, genetic engineering, irrigation, pesticide use, soil degradation, waste management, and sustainable agriculture.

## **SCI 211 - CHEMISTRY – 1.0 cr.**

This lab intensive science course is designed to prepare high school students for a broad understanding of how chemistry impacts their everyday lives. This course will introduce students to the basics regarding: measurement, the structure and properties of the atom, chemical compounds, chemical reactions, acids and bases, solutions, gases and their behavior, organic chemistry, and nuclear chemistry. Chemistry is intended to prepare students for success in introductory college level chemistry courses, technical careers or training, and household management.

## **SCI 217 - HONORS CHEMISTRY – 1.0 cr.**

This course investigates the properties of matter through many hands-on chemistry labs, demonstrations, and problem solving activities. It is designed to prepare high school students for the rigors of a 4-year college program in science, engineering, or health care related field such as pre-medical or pharmacy.

The content covered in the course includes a detailed study of measurement, the structure and properties of the atom, chemical compounds, chemical reactions, acids and bases, solutions, gases and their behavior, organic chemistry, and nuclear chemistry.

## **SCI 229 – PHYSICS – 1.0 cr.**

This course is designed to acquaint the student with the basic concepts of physics and provide students with a better understanding and appreciation for the physical world. It will also enable students to recognize and understand the simplicity of the broad general laws governing the universe. Laboratory work and demonstrations are used for the presentation of mechanics, heat energy, wave motion, dynamics, optics, sound, and electricity. Problem solving will be used in order to lead the students toward an awareness of how principles inter-relate with physical phenomena.

## **SCI 285 - HUMAN ANATOMY AND PHYSIOLOGY - 1.0 cr.**

This course is designed to introduce the basic principles of the study of the structure and function of the human body to students planning on entering any medical-related field after high school. Following an introduction to the levels of organization of the human body, students will examine the histology, gross anatomy, and functions of organs of the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. Laboratory activities will include the use of slides, models, preserved specimens, interactive sensory labs, and computer simulated dissections and physiology exercises.

## **SCI 290 - FORENSICS - 1.0 cr.**

This hands-on laboratory course is designed to introduce interested students to the world of forensic science. Topics covered include: application of the law, evidence, the crime scene, fingerprints and impressions, hair and fibers, blood, DNA, chemicals, soil, glass, forensic entomology, human remains, document analysis, and major crime cases.

## **SCI 219 – GENERAL SCIENCE – 1.0 cr.**

General Science is an overview of the following branches of science: Scientific Theory and Practice, Astronomy and Geology. The topics covered include: scientific methods, the Earth in space, history of the Earth including plate tectonics, mountain formation, rocks and minerals, and natural resources.

## **SCI 206 – ENVIRONMENTAL SCIENCE – 1.0 cr.**

Environmental Science is a course for students considering a career in the environmental sciences or simply interested in the environmental science field. Students have a wide range of interest and understanding of this field and may plan to pursue an employment opportunity in the natural resources field upon graduation from high school. This course will stress an understanding of the delicate balance of nature and man's influence on that balance. Fresh water and

terrestrial ecological principles will be a focus. Current issues dealing with pollution, toxic waste, acid rain, energy consumption and world food supplies will be examined. Basic fundamentals of conservation and wildlife management will be presented. Students will study in detail both aquatic and terrestrial ecosystems in addition to the causes and solutions to various environmental issues. This course teaches the major components of the Pennsylvania Envirothon including:

- Soils and Land Use
- Aquatic Ecology
- Forestry
- Wildlife
- Environmental Issues

### **SCI 208 – PRINCIPLES OF AGRICULTURAL SCIENCE – PLANT – 1.0 cr.**

Principles of Agricultural Science – Plant (ASP) course provides a foundation of plant science knowledge and skills. 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 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 discover the value of plant production and its impact on the individual, the local, and the global economy. 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.

Students will learn specific connections between the course’s lesson and Supervised Agricultural Experience and FFA components of agricultural education programs. Students will improve investigative, experimental and communication skills.

The ASP course is intended to build a foundation on the Introduction to Agriculture, Food and Natural Resources course. The course is structured to enable all students to have a variety of experiences that will provide an overview of the plant industries. To complete the Plant Program of Study, CASE offers specialization courses (Animal and Plant Biotechnology or Food Science and Safety) and the capstone course, Agricultural Research and Development. The knowledge and skills students develop will be used in the specialization and capstone courses within the CASE program.

The ASP course includes the following units of study:

- Worlds of Opportunity
- Mineral Soils
- Soilless Systems
- Anatomy and Physiology
- Taxonomy
- The Growing Environment
- Plant Reproduction

- Surviving a Harsh Environment
- Crop Production and Marketing
- Pest and Disease Management

### **SCI 228 - AP BIOLOGY – 2.0 cr.**

Advanced Placement Biology is designed to be the equivalent of a two-semester college introductory biology course usually taken by biology majors during their first year. It will emphasize molecular and cellular biology, organism and population biology, and heredity and evolution. The most important difference between this course and Honors Biology will be that students will assume all of the responsibility for his/her learning. Each student will be presented with a framework for studying, as well as help with the more difficult concepts, but the student must do the hard work. Students will be expected to learn the interrelationships among the eight themes and underlying facts that they must know, as well as retain an incredible amount of detail. Students also learn to become independent thinkers who can analyze experiments and data, and relate their learning to themselves, the environment, and our society. Topics include biochemistry, cytology, cellular energetic, molecular genetics, heredity, evolution, taxonomy, diversity of organisms, structure and function of plants, structure and function of animals, and ecology.

# Language Arts

## **ENG 009 - CP ENGLISH 9 – 1.0 cr.**

English 9 will consist of a study of traditional contemporary literature, composition, grammar, and speaking and interpersonal communications. These components will be integrated into developing and enhancing the individual student's skills in reading, writing, speaking, listening, and interpreting the written and spoken word as aligned with the ELA standards.

## **ENG 010 - HONORS ENGLISH 9 – 1.0 cr.**

Honors English 9 offers an extensive examination of literary genres through close investigation of novels, poetry, plays, nonfiction and short stories from various literary periods. The honors curriculum will contain a heightened focus of the analysis of all literature through diverse critical approaches. In addition to literary analysis, students will be expected to produce in class and out of class essays focusing on the following genres: personal narrative, informational, and persuasive.

*English teachers will have direct conversation with individual students who are currently excelling in the current year's English course to consider taking Honors level English coursework in the next respective school year. A benchmark of 90% or better is strongly recommended for any student interested in taking Honors English in the next school year.*

## **ENG 013 – CP ENGLISH 10 – 2.0 cr.**

English 10 offers an overview of American and Contemporary Literature through close investigation of poetry, novels, plays and short stories from varied time periods. The course will also focus on writing as a means of literary analysis and will include the practice and evaluation of the process of writing itself. In addition to literary analysis, students will be expected to produce in class and out of class essays focusing on the following genres: personal narrative, informational, and persuasive.

## **ENG 014 - HONORS ENGLISH 10 – 1.0 cr.**

Honors English 10 offers an extensive examination of American and Contemporary Literature through close investigation of novels, poetry, plays and short stories from various literary periods. The honors curriculum will contain a heightened focus of the analysis of all literature through diverse critical approaches. In addition to literary analysis, students will be expected to produce in class and out of class essays focusing on the following genres: personal narrative, informational, and persuasive.

*English teachers will have direct conversation with individual students who are currently excelling in the current year's English course to consider taking Honors level English coursework in the next respective school*

*year. A benchmark of 90% or better is strongly recommended for any student interested in taking Honors English in the next school year.*

## **ENG 017 – CP ENGLISH 11 – 1.0 cr.**

English 11 offers an overview of British and Contemporary Literature through close investigation of poetry, novels, plays and short stories from various periods. This course will also focus on writing as a means of literary analysis and will include the practice and evaluation of the process of writing itself. In addition to literary analysis, students will be expected to produce in class and out of class essays focusing on the following genres: personal narrative, informational, and persuasive. Students will also be expected to communicate at a professional level, in groups, and in class discussions.

## **ENG 018 - HONORS ENGLISH 11 – 1.0 cr.**

Honors English 11 offers an extensive examination of British and Contemporary Literature through close investigation of novels, poetry, plays and short stories from various literary periods. The honors curriculum will contain a heightened focus of the analysis of all literature through diverse critical approaches. In addition to literary analysis, students will be expected to produce in class and out of class essays focusing on the following genres: personal narrative, informational, and persuasive.

*English teachers will have direct conversation with individual students who are currently excelling in the current year's English course to consider taking Honors level English coursework in the next respective school year. A benchmark of 90% or better is strongly recommended for any student interested in taking Honors English in the next school year.*

## **ENG 027 – CP ENGLISH 12 – 1.0 cr.**

English 12 offers an overview of World Literature through close investigation of poetry, novels, plays and short stories from various periods of time. This course will also focus on writing as a means of literary analysis and will include practice and evaluation of the process of writing itself. In addition to literary analysis, students will be expected to produce in class and out of class essays focusing on the following genres: personal narrative, informational, persuasive, and technical. This course will examine the mechanics of language including grammar, punctuation and usage. Also, throughout the year, students will be immersed in vocabulary acquisition to prepare them for the rigors of college. The course will conclude with an elaborate study and practice of the art of public speaking.

## **ENG 026 – ENGLISH LANGUAGE AND LITERATURE 12 – 1.0 cr.**

English Language and Literature offers an overview of Contemporary Literature through close investigation of novels, short stories, and historical fiction. This course will also focus on the art of writing, including components such as word choice, sentence structure, paragraph formation and basic composition. Students will be expected to produce in

class and out of class responses and essays focusing on the following genres: personal narrative, informational, persuasive. In addition, students will learn the art of business and technical writing. The course will conclude with a study and practice of the art of public speaking.

### **ENG 028 - AP ENGLISH LIT. AND COMPOSITION – 2.0 cr.**

The primary emphasis of the AP Literature and Composition course is to introduce and enhance the skills in which students need to excel on the AP exam as well as in their future English courses. The course objectives will enable the students to:

- Develop accurate, perceptive reading through close study of major texts (English, American and Classical)
- Acquire a fluent, precise writing style through the preparation of essays pertaining to the texts
- Understand the techniques of poetry as they affect and enhance meaning in a poem
- Generate independent thoughtful, and analytical discourse during class discussions

Students will function as a community of learners. If students are committed to the work as well as to listening and learning from each other, this class will ultimately become one in which all are teachers and students.

*English teachers will have direct conversation with individual students who are currently excelling in the current year's English course to consider taking AP level English coursework in the next respective school year. A benchmark of 90% is strongly recommended as well completion of Honors English 11.*

### **ENG 015 – CREATIVE WRITING – 1.0 cr. (Online Course)**

This course will be an exploration of creative writing through experience in three genres: short story, poetry, and screenplay/play writing. Through guided online modules, students will study the craft and structure of these genres as they prepare pieces for publication and/or competition, beginning with submissions to the Scholastic Writing Contest and “The Apprentice Writer” literary magazine. Students will be required to submit a portfolio of selected works for their final grade.

*\*Please note that this course will be offered online only. A MASD English teacher will be assigned as the course instructor/facilitator. Office hours will be made available for students to meet with the instructor, if needed.*

### **COM 034 – THEATRE – 1.0 cr.**

This is a course that highlights many aspects of the world of theatre. Students will learn the history, the crafts and the art of the stage. Lessons include acting, improvisation, make-up, lighting, props, costumes and more. This is an excellent opportunity to gain performing experience as well as the history behind the artistic genre.

### **COM 036 – MUSICAL THEATRE – 1.0 cr.**

Musical Theatre is a course designed to study the history of the Musical Theatre genre, as well as to cover units on

singing and acting techniques specific to the style. The history of dance and its contribution to the art form will also be covered, as well as analysis of various shows.

Prerequisite: Theatre I

### **COM 035 – BROADCAST COMMUNICATIONS I – 1.0 cr.**

Broadcast Journalism is the updated version of our Broadcasting course. In this course, students will develop and hone their broadcasting, reporting, editing, and writing skills in various broadcasting styles while learning the ever-evolving concepts of digital journalism. The main emphasis of this course is to learn the basics of reporting and copywriting for the Raider Review and Raider’s Digest, our YouTube channel and digital school newspaper/journal. Students will also be given additional opportunities to create video and movie projects.

### **COM 037 – BROADCAST COMMUNICATIONS II - 1.0 cr.**

Broadcast Journalism is the updated version of our Broadcast Communications course. Students must complete the first level of Broadcast Communications in order to take this course. As in the first level, students will continue to develop and hone their broadcasting, reporting, editing, and writing skills in various broadcasting styles while learning the ever-evolving concepts of digital journalism. The main emphasis of this level is to serve as the writing and editing team for the Raider Review and Raider’s Digest, our YouTube channel and digital school newspaper/journal. Students will also be required to submit articles to outside sources for external publication opportunities. Lastly, as in the first level, students will be given additional opportunities to create video and movie projects.

### **COM 039 – BROADCAST PRODUCTION AND DESIGN – 1.0 cr.**

Students must complete Broadcast Communications I and II in order to take this class. Students will continue to develop and hone their broadcasting, reporting, editing, and writing skills in various broadcasting styles while learning the ever-evolving concepts of digital journalism. The main emphasis of this level is to serve as the writing and editing team for the Raider Review and Raider’s Digest, our YouTube channel and digital school newspaper/journal. Students will also be required to submit articles to outside sources for external publication opportunities. The following concepts will be covered:

- Time Management
- Video Concept and Design
- Software Application
- Creative Application
- Portfolio Preparation
- Work Place Experience

### **COM 040 – YEARBOOK – 1.0 cr.**

In this 21st century, cross curricular, project-based class, students work collaboratively by using technology such as digital cameras, photo editing software and online design

software to digitally produce a yearbook. Students use writing skills, communication skills and creativity to tell the story of the school community and peers in an engaging way. Students demonstrate knowledge of graphic design and think creatively when organizing information within the yearbook. In this college and career ready course, students think critically to meet deadlines, track goals, and utilize multimedia to market and disseminate information that aligns with and models an actual business.

## Art

### **ART 551 - ART I – 1.0 cr.**

Students will learn the basic elements and principles of design. Through paints and pastels the class will learn color theory. Many of the projects will be designed to improve their drawing skills. They will be introduced to many types of media and techniques. Most of the projects in Art 1 are two-dimensional, although they occasionally produce 3-D work. A few of the projects completed in this foundational course include; studies in one-point perspective, figure drawing, monochromatic painting, calligraphy and coil-built clay projects.

### **ART 553 - ART II - 1.0 cr.**

Students will build and expand their skills and knowledge of art in this course. The students will learn how to improve their compositional skills with more design-orientated projects. They will learn how to create a two-point perspective drawing. Warm & Cool color studies and more projects building their understanding of color theory and painting will be key areas of learning in Art 2. Students will also explore printmaking and collage, as well as slab-built clay projects in this course.

### **ART 555 - ART III – 1.0 cr.**

Art III is open to students who have successfully completed Art I and Art II. These courses assume that a student has achieved a certain level of mastery of content and materials. The student will need to work at a high level of proficiency and creativity. Grading expectations are more stringent at this advanced level. We will continue to build on previously learned skills and will learn new material and techniques throughout the course.

### **ART 556 - ART IV – 1.0 cr.**

Art IV students must have completed the previous three levels. They must have had a minimum average of 85 percent in Art III or they will be required to have permission from both the office and the art instructor before being admitted to this class. We tend to do fewer, but more involved projects at this level.

## Music

### **MU 544 - VOCAL WORKSHOP – 1.0 cr.**

Vocal Workshop is a course combining the ensemble experience of Concert Choir with a more intensive and

rigorous solo voice curriculum. It is designed around the study of vocal performance and pedagogy. Students will perform at least 2 public concerts as well as experiencing professional performances. Students will study choral repertoire, classical repertoire and technique and will incorporate numerous other vocal genres into their study such as jazz and musical theatre. Students will receive individualized instruction as well as theory training and music history study. Students planning on pursuing music at the college level will also receive training in audition procedures and resume/repertoire list writing.

### **MU 540 - CONCERT BAND – 1.0 cr.**

High School Concert Band is a class open to any 9th, 10th, 11th, or 12th grade student who is interested in instrumental music. Previous experience on a concert band instrument is required. In this class, students will study various forms and styles of music, and explore different cultures and backgrounds of composers. Each year, the students in the class will plan, produce, and perform at least four public concerts. They will explore how music selection, sound and lighting techniques, and physical presentation can effect the audience appreciation of a musical event. Our curriculum is based on and meets the requirements for the “National Standards for Arts Education” and the “Pennsylvania Standards for Music.”

### **MU 547 – GUITAR – 1.0 cr.**

This class rocks...literally! If you have never played before, this class will start from the beginning with posture, finger positions, strumming techniques and more. If you already play, this class will teach you how to read music and play even more of your favorite chords and melodies. By the end of this course, everyone will be able to read music, tabs, and chord symbols like a pro. Each student will be featured in at least one public performance during this course. Students are expected to supply their own student level, or better, acoustic guitar for use during class.

### **MU 548 - SONG WRITING – 1.0 cr.**

Song writing is a class designed for students at various levels of musical experience. Whether you are a singer, instrumentalist, guitar player, digital composer, or just enjoy listening to music, the project based multi-leveled curriculum design will be tailored to meet your individual interests. Students will be given the opportunity to receive instruction in music theory, basic instrumental techniques, digital musicianship, etc., to facilitate the creation of new music in a wide variety of styles and genre.

### **MU 549 – ADVANCED SONG WRITING AND PRODUCTION – 1.0 cr.**

Advanced Song Writing and Production offers an upper level(s) of instruction pertaining to music theory, instrumental techniques, and digital musicianship. This upper level will also explore the areas of Music Business and career opportunities in the composition field. Portfolio preparation of the student’s comprehensive body of work will be assembled for interview and audition opportunities.

# World Languages

## **WL 502 - SPANISH I – 1.0 cr.**

Basic conversational skills in Spanish will be developed as the students learn vocabulary dealing with classroom objects, household items, food and family, as well as the adjectives to describe these nouns. The students will also learn how to conjugate verbs, a very important aspect of learning a foreign language. Present and past tenses will be covered, as well as various irregular verbs. During this course the students will elaborate on the previous knowledge that they have acquired about the geography of Spanish-speaking countries. They will develop an awareness of Spanish daily life by learning about the various differences in culture among the Spanish-speaking world (Spain, Central America, South America, Caribbean Islands, United States and Mexico). Throughout the year the students will work individually and cooperatively in listening, reading, and writing activities while they connect with others and grow in cross-cultural awareness.

## **WL 505 – SPANISH II – 1.0 cr.**

Spanish II is a continuation in the study of Spanish grammar and culture. This course builds on the fundamentals established in Spanish I. Emphasis will be placed on students' development of oral and written proficiency. Listening and reading skills will also be presented. Students planning on attending college will find this course beneficial towards furthering their education.

## **WL 506 – SPANISH III - 1.0 cr.**

Spanish III further continues the study of Spanish grammar and culture. This course builds on the fundamentals established in Spanish II and I. Spanish III expands students' knowledge of vocabulary and communication skills. A greater emphasis will be placed on the development of speaking, reading, writing, and listening skills. Students will be expected to occasionally read short stories in Spanish as well as produce written compositions in Spanish.

## **WL 507 – SPANISH IV – 1.0 cr.**

Spanish IV is the final stage in the study of Spanish grammar and culture at the high school level. This course builds on the fundamentals established in Spanish III, II, and I. Students will be exposed to remaining grammatical concepts as well as introduced to new vocabulary. The focus of this class is primarily on students' communication skills. As a result, the majority of class discussion will be in Spanish. Students will be required to read, discuss, and write about various types of Spanish literature.

## **WL 509 – FRENCH I – 1.0 cr.**

Basic conversational skills in French will be developed as the students learn vocabulary dealing with classroom objects, household items, food and family as well as the

adjectives to describe these nouns. The students will also learn how to conjugate verbs, a very important part of learning a foreign language. Present and past tenses will be covered as well as various irregular verbs. Throughout the year students will work individually and cooperatively in listening, reading, and writing activities while they connect with others and grow in a cross-cultural awareness.

## **WL 512 – FRENCH II – 1.0 cr.**

French II is a continuation in the study of French grammar and culture. The course builds on the fundamentals established in French I. Emphasis will be placed on students' development of oral and written proficiency. Listening and reading skills will also be presented. Students planning on attending college will find this course beneficial towards furthering their education.

## **WL 513 – FRENCH III - 1.0 cr.**

French III further continues the study of French grammar and culture. This course builds on the fundamentals established in French II and I. French III expands students' knowledge of vocabulary and communication skills. A greater emphasis will be placed on the development of speaking, reading, writing, and listening skills. Students will be expected to occasionally read short stories in French as well as produce written compositions in French.

# Tech Prep

## **TE 780 – CREATIVE ENGINEERING AND DESIGN – 1.0 cr.**

This course is designed at an introductory level to learn various common materials and machine processes used to transform these materials into usable products. Students will individually construct various projects to learn how to operate equipment in the Manufacturing Lab. After taking this course, students will understand blue print reading, manual machining, sheet metal, welding and other project related production skills. Students will learn Inventor and Fusion 360 programs for design related work. Safety and cleanup will be emphasized. The following machines will be used in the course: *metal lathes, milling machines, plasma cutters, oxy acetylene torch, MIG, TIG, & stick welders, metal cutting circular saws, band saws, reciprocating saws, squaring shear, bar folder, box and pan brake, angle grinder, drill press, hand drills, pedestal grinder, buffer and various other tools used to process metal materials.*

## **TE 781 – INTEGRATED STEM II – 1.0 cr.**

STEM II exposes students to a broad spectrum of content related to Science, Technology, Engineering and Mathematics. Promoting leadership skills with a focus on future career choices, this course is built around problem solving and teamwork. An emphasis on soft skills, including communication and critical thinking will help to prepare students for facing the challenges of a changing and demanding world. This is a competition-centered course, and students should expect to compete with students from other schools on multiple projects.

## **TE 782 – INTEGRATED STEM III – 1.0 cr.**

STEM II exposes students to a broad spectrum of content related to Science, Technology, Engineering and Mathematics. Promoting leadership skills with a focus on future career choices, this course is built around problem solving and teamwork. An emphasis on soft skills, including communication and critical thinking will help to prepare students for facing the challenges of a changing and demanding world. This is a competition-centered course, and students should expect to compete with students from other schools on multiple projects.

## **TE 733 - AutoCAD – COMPREHENSIVE 2D APPLICATIONS (COMPUTER ASSISTED DRAFTING) (CAD 120 @ PCT) – 1.0 cr.**

This Penn College NOW course covers 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. (Students have the capacity to earn 3 college credits for successful completion of this course – amount determined by Penn College.)

*Students must pass the placement exam in order to receive Penn College credit.*

## **TE 734 – INTRODUCTION TO WEB PAGE DEVELOPMENT (BWM 150 @ PCT) – 1.0 cr.**

Introduction to Web Page Development provides introductory coverage of the Internet and online Web technologies. Skills learned include how to plan, create, and maintain static web pages. (Students have the capacity to earn 3 college credits for successful completion of this course – amount determined by Penn College.)

*Students must pass the placement exam in order to receive Penn College credit.*

## **TE 735 – INTRODUCTION TO PROGRAMMING (CIT 160 @ PCT) – 1.0 cr.**

Introduction to Programming introduces problem solving techniques, elementary programming, and the application of these techniques in developing structured programs. A current high-level language is used to illustrate the implementation phase of program development. (Students have the capacity to earn 3 college credits for successful completion of this course – amount determined by Penn College.)

*Students must pass the placement exam in order to receive Penn College credit.*

## **TE 736 – INTRODUCTION TO AGRICULTURAL MECHANIZATION – 1.0 cr.**

Introduction to Agricultural Mechanization is designed to introduce students to power and machinery. Students will learn about engines and power transmission including hydraulics. Students will build, service and maintain power equipment. This course will also cover electrical wiring and applications including circuits, motors, controls, and materials handling and processing. Advancements in technologies like GPS, electronic control, and drones have revolutionized the industry and have made precision agriculture a reality. Recently, the Pennsylvania Department of Agriculture and the Northeast Equipment Dealers Association have recognized Ag equipment service technicians as a high-priority occupation. As a result, this course has been created to cover the following topics:

- Small Gas Engines
- Hydraulics
- Electrical Wiring
- Motor Control
- Remote Sensing/Satellite Imagery
- GPS/Precision Agriculture/Drones
- Diesel Service
- Shop Safety
- Chain Saw Safety
- ATV Safety
- Tractor Safety



### **TE 740 - CONSTRUCTION HAND & POWER TOOLS (BCT 103 @ PCT) - 1.0 cr.**

This course includes a survey of hand and power tools typically used to perform construction work. Emphasis is on the development of skills needed to effectively perform layout, measurement, cutting, fastening and finishing operations. Study also includes maintenance of tools and equipment, safe use of hand and power tools, and emerging tool technology. (Students have the capacity to earn one college credit for successful completion of this course - amount determined by Penn College.)

*Students must pass the placement exam in order to receive Penn College credit.*

### **TE 741 - CONSTRUCTION MATERIALS & PROCESSES – 1.0 cr.**

Students will further their knowledge in residential, commercial, and basic construction principles. An opportunity is provided to work with many of the latest tools and materials used in the industry today. Some of the skills students will be provided with are: finding grade level using a laser level, designing and estimating building materials, roofing materials and methods, drywall installation, and exterior wall finishes. This course will allow students to explore and research various types of construction technology and careers available in construction related fields.

### **TE 747 - FRAMING PRINCIPLES - 1.0 cr.**

Theory and application of framing techniques in residential and light commercial construction. Emphasis on basic principles and skills used in hand and machine woodworking operations.

### **TE 750 – MANUFACTURING ENGINEERING I– 1.0 cr.**

Manufacturing courses will prepare students to acquire broad-based transferable skills in manufacturing technology through hands-on training. In Manufacturing I, students will learn about technologies associated with measurement, layout, quality control, manufacturing process and work place readiness skills. Manufacturing process and technologies covered will include, but are not limited to: sheet metal production, welding, manual machining, injection molding, safety, and design. Professionalism, proper conduct in the work place, and career exploration will also be major portion of the course. Safety and cleanup will be emphasized.

Prerequisite: Creative Engineering and Design

### **TE 751 – MANUFACTURING ENGINEERING II – 1.0 cr.**

Manufacturing II is a direct continuation of Manufacturing I. Students should expect to use various types of technologies to continue building on the skills learned in Manufacturing I. Students will use hands-on activities to explore the technology used in manufacturing processes and

industrial environment. The focus of those skills will be on teamwork, communications, welding, manual machining, CNC machining, quality control, blue print reading, problem solving, plastics injection molding, critical thinking skills, and professionalism in the workplace. The focus in Manufacturing II will begin to shift to also incorporating aspects of the design process and job planning into the course work as well as beginning to acquire work place skills and professionalism required for the industrial technology work place. Safety and cleanup will be emphasized.

### **TE 752 – PRECISION PRODUCTION AND ENGINEERING – 1.0 cr.**

Precision Production and Engineering combines design technologies with manufacturing technologies in a hands-on course that will cover a wide range of manufacturing, engineering, and career exploration topics. The engineering design process is applied. Manufacturing topics will focus on current methods of CNC Machining, CNC Plasma Cutting, and Rapid Prototyping using 3D printing technology. Engineering topics will include instruction in G code, Design, Fusion 360, Inventor, Auto CAD and other machine related software. Precision Production and Engineering is open to all students who meet the prerequisite.

Prerequisite: Man. Eng. II or Comp. 2D Applications

### **TE 122 – PARAMETRIC MODELING USING AUTODESK INVENTOR – 1.0 cr.**

**(CAD122 @ PCT):** 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 CAD119) 3 Credits (2 Lecture + 1 Lab)

*Students must pass the placement exam in order to receive Penn College credit.*

### **TE 112 – INTRODUCTION TO GAMING AND SIMULATION – 1.0 cr.**

**(CIT 112 @ PCT):** 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 capacity to earn 3 college credits for successful completion of this course.)



## **TE 770 - GRAPHICS COMMUNICATIONS I – 1.0 cr.**

Communications I is designed to introduce students to the world of multimedia, printed publications, web design, and digital video. Students will use state-of-the-art computers and software that is found in the graphic communications industry. We will learn the steps to follow in order to design a piece of media, from thumbnail sketches to a finished product.

Students will also stay up to date with some of the latest developments in the communications field by researching journals and appropriate web sites and learn about the new equipment and techniques that are being developed on a daily basis.

The course is primarily project based. Each project will be summarized by a design brief that will include the following information:

- A detailed description of the requirements of the project
- Background information regarding the project
- Some helpful tips on how to begin and work your way through the project

The following is a list of some projects that we will work on during the course:

- Business Cards
- Letterhead
- Digital Photography
- Matting and Framing
- Photo Restoration
- Digital Photo Manipulation
- Shooting and Editing Digital Video
- Logos
- Web Design
- Posters
- Brochures
- Newsletters
- Presentations
- Printing T-Shirts
- Page Layout

## **TE 771 - GRAPHIC COMMUNICATIONS II – 1.0 cr.**

This course includes the introduction to the concepts of electronic typography and the fundamentals of layout and design for creating documents in electronic forms. Topics include history of type, classifications of type, design principles, software and hardware components, and outputting to various devices. Popular software packages are used to create, edit, and print various documents.

## **TE 772 – GRAPHICS COMMUNICATIONS III - 1.0 cr.**

Graphic Communications III is for the student who has determined that they have a definite interest in a career field that falls under the umbrella of Graphic Communications. Students will continue to use state of the art computers and

software that is found in the graphic communications industry and at the same time assist Graphic Communications I and II as they learn some of the skills that Graphic Communications III students have already mastered.

Graphics III students have been involved in the graphics program for several years and are typically very well versed in the day-today projects that are being completed in the graphic laboratory. During their third year in the program, Graphics III students will have the opportunity to take on a leadership role in the graphics program. Leadership experience usually involves editorial responsibilities for one or more of the following publications designed in the graphics lab:

- Yearbook
- Fall Sports Program
- Winter Sports Program
- High School Curriculum Guide
- Various School Publications
- Calendars
- Special Projects for the Community

## **TE 774 – DIGITAL IMAGING I – 1.0 cr.**

Digital Imaging I is designed to introduce students to the exciting world of digital photography. Students will use state-of-the-art cameras, computers, and software found in the digital photography industry. Students will learn neat tricks that produce good photographs, and master the technical things that people should know about digital pictures and what happens to them in the “digital darkroom”.

With the development of the digital single lens reflex camera, all of the same techniques used in shooting pictures with a traditional film camera will be covered in much the same manner using digital cameras. The art of taking a good picture remains the same – shutter speed, f-stops, motion blur, depth-of-field, types of lenses will still be the focus of this course. Instead of using chemicals to develop film, we will load the picture files from the cameras to the computer and use Adobe Photoshop to edit the pictures into their final printed form.

# Family & Consumer Sciences

## **FACS 709 – PASTRY ARTS I – 1.0 cr.**

This course is designed to teach the basics of baking. Student should have at least one prior course within the Family and Consumer Science area before taking Pastry Arts I. Students need to come to this class with a working knowledge of kitchen measurements, food safety & sanitation practices.

## **FACS 713 – PASTRY ARTS II – 1.0 cr.**

Pastry Arts II prepares students planning to become pastry chefs. Students must successfully complete Pastry Arts I to enroll in this course. In this course, students build upon techniques mastered in Pastry Arts I. Students are expected to prepare pie pastries, work with yeast, meringues, cake batters, etc. Students work with Chocolates, Puff Pastries, various cheeses, gourmet fruits, and nuts in the preparation of cheesecakes, cakes, pies, tartlets, breads and other gourmet desserts commonly served in upscale restaurants.

## **FACS 710 – CULINARY ARTS I– 1.0 cr.**

Culinary I teaches the basics in food preparation. Students study basic techniques in meat, fish, poultry, vegetable, fruit, egg and cheese, milk and cookery used in today's food service industry. Food labs are based on teaching entry-level food preparation in the Food Service kitchen.

## **FACS 711 – CULINARY ARTS II – 1.0 cr.**

Culinary II students study more advanced food preparation techniques and master the skills necessary for entry level employment in the food service industry. Students must be able to work independently and be able to demonstrate basic food preparation skills. Students in this course are expected to prepare meals and beverages commonly served in the food service industry.

## **FACS 790 - CONSUMER SCIENCE INTERNSHIP - 1.0 cr.**

This Internship is for the student who has successfully completed all of the Pastry Arts and Culinary Arts classes. This student will play an important role in helping to manage the kitchen and the dining room at our school's restaurant, "The Season's." This student must be trustworthy, hardworking, dependable and have an interest in a career in the Food Service/Family Consumer Science fields.

# Homemaker/Home Health Aide Program

This program is designed for students with a strong interest in working with the elderly and individuals (both young and old) with disabilities. As a result of this program, students will also have a better understanding of responsibilities of a Certified Nurse's Aide (CNA), thus providing them many of the skills required to complete a CNA training course.

As our society continues to age, the demand and need for individuals trained as Homemaker/Home Health Aides continues to increase. With the high cost of nursing homes, medical care and hospital stays, more and more families are choosing to keep their loved ones at home in the comfort of their own surrounding. The duty of a Homemaker/Home Health Aide is to provide personal and nursing care within the client's own home.

## **HH720 – PERSONAL CARE /HOMEMAKING SERVICES –1.0 cr.**

This course introduces the student to Client care procedures, Client rights, restorative care, infection control, daily care, bathing, feeding, special treatment, mediations, safety, etc. This course also addresses the principles of household management, meal preparations, grocery shopping nutrition, meal planning, home maintenance, cleaning and laundry.

*\*Please note that this course will be offered online only. A MASD English teacher will be assigned as the course instructor/facilitator.*

# Business

## **BUS 426 – BUSINESS MANAGEMENT – 1.0 cr.**

This course is designed to provide students with an understanding of how businesses work and how the parts fit together. Specifically, students will study how the business environment (financial markets, global competition, legal and regulatory system and the industry in which the firm operates) affects business decisions and actions. Students will explore the importance of quality, teamwork and technology in all facets of business. Marketing, Databases and Accounting will be integral parts of the subject matter studied.

## **BUS 427 – PRINCIPLES OF INVESTING – 1.0 cr.**

Students enrolled in this course will be introduced to real world investing in the stock market with use of actual funds that the participants will manage throughout the year. Students will discover the basics of the most common types of investments, such as mutual funds, bonds, stocks, and exchange traded funds. They will then learn some of the more advanced techniques of investing, such as leveraging and short selling. Students will analyze how each type works, including advantages, disadvantages and the yield one could expect from them. In addition, students will learn how to manage investment portfolios and estimate the future value of investments.

*\*This course is available to Senior students only.*

## **BUS 428 – PERSONAL FINANCE – 1.0 cr.**

Personal Finance is designed to increase financial literacy. The topics will focus on employability, career development, budgeting, and money management. Focus will also be given to consumer rights and responsibilities. Studies in these subjects will assist students in making important life decisions and prepare them to be knowledgeable consumers.

## **BUS 423 – DIGITAL CITIZENSHIP – .25 cr. (Online Course)**

This course is designed to help students develop an understanding of the concepts of several popular software packages and to help student users understand how to use technology appropriately.

- Word -create announcements & import graphics from the Web as well as create a research paper with a table.
- Excel -create a worksheet & embedded chart while utilizing formulas, charts & web queries.
- Google suite of apps.
- PowerPoint -use a design template & style checker to create a presentation in addition to using an outline view and clip art to create an electronic slide show.

## **BUS 424 - INFORMATION, TECHNOLOGY, AND SOCIETY (CSC 124 @ PCT) – 1.0 cr.**

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. (Students have the capacity to earn 3 college credits for successful completion of this course. Amount determined by Penn College)

*Students must pass the placement exam in order to receive Penn College credit.*

## **BUS 327 - ECONOMICS – 1.0 cr.**

This course explores the fundamentals of economics and personal finance. The guidelines of the Pennsylvania State Education Standards will be followed to develop knowledge of economic principles and their impact on everyday life. Students will be introduced to the macroeconomic and microeconomic theories that can be applied to real life situations. Students will engage in an investment competition to build a sound foundation for the other issues addressed in the course and to develop a general understanding of personal investment opportunities.

At the same time, students will strongly be encouraged to question, analyze, and develop personal opinions on issues of economic importance that can enhance their financial future and assist them in making better financial decisions.

## **BUS 105 – INTRODUCTION TO BUSINESS (MGT105 @PCT) – 1.0 cr.**

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. (Formerly MGT110) 3 Credits (3 Lecture + 0 Lab)

*Students must pass the placement exam in order to receive Penn College credit.*

# Social Studies

## **SS 313 - AMERICAN HISTORY II – 1.0 cr.**

American History II examines American History from 1865 to approximately 1973. Students will identify and explain the history of Reconstruction, the Gilded Age, the Progressive Era, World War I, the “Roaring 20’s,” the Great Depression, World War II, the Holocaust, the Cold War, the “Happy Days” of the 50’s, the turbulent 60’s, and the Vietnam War.

Throughout examination of these eras, students will apply, interpret, and relate primary source materials to discuss the social, economic, and political situation of each era. Additionally, students will compare, dissect, and analyze personal decisions of prominent and ordinary individuals and the consequences of their decisions on American history. Throughout the course, students will develop, create, and role-play a plethora of hands-on projects to supplement course material. Everyday classes involve judging, evaluating, and connecting course material on a historical and contemporary context to make history a living curriculum.

## **SS 314 – WORLD HISTORY I – 1.0 cr.**

World History I is a survey course that explores the key events and global historical developments before 1490 C.E. that have shaped the world we live in today. The scope of Ancient World History provides the latitude to range widely across all aspects of human experience: economics, science, religion, philosophy, politics & law, military conflict, literature & the arts. The course will illuminate connections between our lives and those of our ancestors around the world. Students will uncover patterns of behavior, identify historical trends and themes, explore historical movements and concepts, and test theories. Students will refine their ability to read for comprehension and critical analysis; summarize, categorize, compare, and evaluate information; write clearly and convincingly; express facts and opinions orally; and use technology appropriately to present information.

## **SS 321 - AMERICAN GOVERNMENT – 1.0 cr.**

American Government provides an intensive look into the creation, functions, intricacies, and ongoing current events of the U.S. government through multiple modalities. An identification and explanation of government vocabulary, origins of the U.S. government, the U.S. Constitution, the three branches of the federal government, federalism, interest groups, individual civil rights, political parties, and public opinion will be examined. Students will apply, interpret, and solve current government case studies using their background knowledge in government course material. Additionally, students will compare, dissect, and investigate political parties,

government structures, U.S. Presidents, public opinion, and historical governments. Throughout the course students will develop, create, and role-play a plethora of hands-on projects during each unit to further develop a governmental principle. Everyday classes involve judging, connecting, and evaluating course material to current government in action.

## **SS 322 – CONTEMPORARY US HISTORY – 1.0 cr.**

This course will explore the major people, events, and ideas that define the American experience of the past half century and more. The course will focus on essential themes of social studies like continuity and change, society and culture, political reaction and reform, economics, conflict, as well as many others. Some of the topics this course will explore include the Civil Rights Movement, Vietnam War, “silent majority” vs. counter-culture, oil crises, AIDS epidemic, rise of new conservatism & evangelicalism, end of Cold War, Persian Gulf War, 9/11, Global War on Terrorism, and more. The purpose of this course is to cover important U.S. historical events that often go overlooked because of their recency and lack of instructional time in other history classes. Understanding these events allows us to better understand how and why we got to the present state, as well as where we are heading in the future. This class offers students a relevant look at recent historical events that greatly affect our lives today.

## **SS 406 – 21<sup>st</sup> CENTURY SKILLS AND CAREERS - .25 cr.**

21<sup>st</sup> Century Skills and Careers is a semester long course in which students will evaluate themselves in areas such as study skills, time management, character, interests, and strengths. Students will explore the education and training needed for specific careers as well as the characteristics of a successful employee. Students will research various careers and participate in activities such as Mock Interviews and Job Shadowing. Students will leave the course with a portfolio containing items such as a resume, timeline for their remaining high school career, and practice job application.

## **SS 336 – SOCIOLOGY/PSYCHOLOGY- 1.0 cr.**

Sociology is an interdisciplinary approach to the study of human behavior and relationships. The course will incorporate concepts from the behavioral sciences of sociology, psychology, and anthropology and apply them to the individual and to his life as a member of various groups. Introductory Psychology is a highly interactive course designed to introduce students to psychology as preparation for more in-depth study in college. This course is also for students who have an interest in human behavior and who enjoy hands-on activities and vigorous discussion. After studying the history of and differing approaches to psychology, students will examine the critical role of the brain, sensation, perception, learning, memory, personality and consciousness. These units will provide a framework

for the study of life span development and psychological disorders and their treatment.

### **SS 331 – AP US HISTORY – 1.0 cr.**

Advanced Placement United States History provides a general overview of the history of the United States from Colonization to the War on Terror. In Chronological order, students will explore America's past, examining the cultural, political, geographical, economical and technological changes that have taken place and have helped to shape us and guide us as a nation today. Topics will include issues relating to the discovery of the New World through the Modern period, focusing on constitutional issues, the Civil War, industrialization, World War, Civil Rights, and immigration.

The AP program in United States History is designed to provide students with the analytical skills and enduring understandings 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 full year introductory college courses.

*In order to be placed in this course, students must meet the following criteria: teacher approval, a minimum of 90% in all previous social studies coursework, and strong reading, writing, and study skills.*

### **SS 229 - STATE AND LOCAL GOVERNMENT (PSC241@PCT) – 1.0 cr. (with SS 145)**

This one semester course will detail state and local government institutions, their functions and responsibilities, as well as intergovernmental relations. (Students have the capacity to earn 3 College Credits for successful completion of this course).

*Students must pass the placement exam in order to receive Penn College credit. \*This course must be taken in conjunction with SS 145.*

### **SS 145 - US HISTORY II: SURVEY SINCE 1877 (HIS145@PCT) – 1.0 cr. (with SS 229)**

This one semester course will detail political, economic, and social development of the United States from 1877 up to and including the Civil Rights movement. It is vitally important that American students know their own history. This course provides them with the fundamentals to understand important events and ideas such as Reconstruction, the Progressive Movement, Turner's Frontier Thesis, Manifest Destiny and U.S. expansion, World War I & II, the Great Depression, gender equality and feminism, the rise of a military-industrial complex, U.S. labor relations, the Cold War, the Civil Rights movement, the Vietnam War, and other leading episodes of the late 19<sup>th</sup> and 20<sup>th</sup> centuries.

*Students must pass the placement exam in order to receive Penn College credit. \*This course must be taken in conjunction with SS 229.*

## Health and Physical Education

### **HPE 833 – PHYSICAL EDUCATION 10 – 0.25 cr.**

The Physical Education program for sophomores encourages students to participate in an activity to the best of their ability, stressing the fact that physical activity is a basic part of the physical, emotional, and social development of all human beings. Through active participation, opportunity is given to develop desirable attitudes of sportsmanship, cooperation, courtesy, responsibility, appreciation of the skill of others and an understanding of strategies employed while participating in a particular sport.

### **HPE 832 - PHYSICAL EDUCATION 11/12 – 1.0 cr.**

The Physical Education program for juniors and seniors encourages students to participate in an activity to the best of their ability, stressing the fact that physical activity is a basic part of the physical, emotional, and social development of all human beings. Through active participation, opportunity is given to develop desirable attitudes of sportsmanship, cooperation, courtesy, responsibility, appreciation of the skill of others and an understanding of strategies employed while participating in a particular sport.

### **HPE 834 – AEROBIC WALKING/CARDIO FITNESS - 0.25 cr. (10<sup>th</sup> grade students) / 1.0 cr. (11<sup>th</sup> and 12<sup>th</sup> grade students)**

This course is designed to provide an opportunity for students to develop a fitness workout plan through the activities of walking and other forms of aerobic exercise. Flexibility, cardiovascular and muscular endurance, as well as muscular strength will be emphasized. Students will be introduced to a low impact form of exercise that is a life-long activity that promotes physical and emotional health. \*This course is an alternative to the regular PE courses and is a good alternative for someone looking into individual fitness, as opposed to competitive/team sports.

### **HPE 836 – FITNESS/CONDITIONING – 1.0 cr.**

This course is designed to give students the opportunity to learn fitness concepts and conditioning techniques used to obtain optimal physical fitness. Students will benefit from comprehensive weight training and cardiorespiratory endurance activities. Students will learn the fundamentals of strength training, aerobic training, and overall fitness training and conditioning. Course includes both lecture and activity sessions. Students will be empowered to make wise choices, meet challenges, and develop positive behaviors in

fitness, wellness, and movement activity for a lifetime.

discussed with law enforcement officials.

**HPE 835 – PE/HEALTH EDUCATION 9 – 0.5 cr.**

The Physical Education program for freshman during the first semester encourages students to participate in an activity to the best of their ability, stressing the fact that physical activity is a basic part of the physical, emotional, and social development of all human beings. Through active participation, opportunity is given to develop desirable attitudes of sportsmanship, cooperation, courtesy, responsibility, appreciation of the skill of others and an understanding of strategies employed while participating in a particular sport.

The health education course during the second semester provides factual information on a variety of health topics so students will be able to make informed decisions and changes in their lifestyle if necessary, to promote wellness throughout their lives.

**HPE 609 - DRIVER EDUCATION – 0.25 cr.**

Driver Education is designed to provide the students with the knowledge and hands-on experience to help them become a safe driver. It also teaches the student an understanding of the responsibilities that come with driving. This course prepares students for the driver's examination and to obtain a Pennsylvania Driver's License. Discussions of the consequences of drinking and driving are also

# Penn College NOW - Dual Enrollment

The Montgomery Area School District takes great pride in the relationship it has developed with the Pennsylvania College of Technology. Students have the opportunity to enroll in Penn College NOW courses and earn high school as well as postsecondary credit.

**Construction Hand & Power Tools (BCT 103 @ PCT)** – This course includes a survey of hand and power tools typically used to perform construction work. Emphasis is on the development of skills needed to effectively perform layout, measurement, cutting, fastening and finishing operations. Study also includes maintenance of tools and equipment, safe use of hand and power tools, and emerging tool technology. (Students have the capacity to earn one college credit for successful completion of this course amount determined by Penn College). **SOPHOMORE APPROVED COURSE**

**AutoCAD – Comprehensive - (Computer Assisted Drafting) (CAD 120 @ PCT)** – This Penn College NOW course covers 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. (Students have the capacity to earn 3 college credits for successful completion of this course determined by Penn College).

**Information, Technology, and Society (CSC 124 @ PCT)** – 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. (Students have the capacity to earn 3 college credits for successful completion of this course. Amount determined by Penn College) **SOPHOMORE APPROVED COURSE**

**Introduction to Gaming and Simulation (CIT 112 @ PCT)** - 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 capacity to earn 3 college credits for successful completion of this course.)

**State and Local Government (PSC 241 @ PCT)**: This one semester course will detail State and local government institutions, their functions and responsibilities; intergovernmental relations. (Students have the capacity to earn 3 college credits for successful completion of the course).

# Penn College NOW - Dual Enrollment

**US History II: Survey Since 1877 (HIS 145@PCT)** – This one semester course will detail political, economic, and social development of the United States from 1877 up to and including the Civil Rights movement. It is vitally important that American students know their own history. This course provides them with the fundamentals to understand important events and ideas such as Reconstruction, the Progressive Movement, Turner’s Frontier Thesis, Manifest Destiny and U.S. expansion, World War I & II, the Great Depression, gender equality and feminism, the rise of a military-industrial complex, U.S. labor relations, the Cold War, the Civil Rights movement, the Vietnam War, and other leading episodes of the late 19<sup>th</sup> and 20<sup>th</sup> centuries. (Students have the capacity to earn 3 college credits for successful completion of the course).

**Parametric Modeling Using Autodesk Inventor (CAD 122 @ PCT):** This course will detail the 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 CAD119) 3 Credits (2 Lecture + 1 Lab)

**Introduction to Business (MGT 105 @PCT):** 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. (Formerly MGT110) 3 Credits

**Introduction to Web Page Development (BWM 150 @ PCT):** Introduction to Web Page Development provides introductory coverage of the Internet and online Web technologies. Skills learned include how to plan, create, and maintain static web pages. 3 Credits

**Introduction to Programming (CIT 160 @ PCT):** Introduction to Programming introduces problem solving techniques, elementary programming, and the application of these techniques in developing structured programs. A current high-level language is used to illustrate the implementation phase of program development. 3 Credits



# Bloomsburg University –STEM Program

The Montgomery Area High School participates in the STEM program through Bloomsburg University. This program allows students to attend Bloomsburg University for a part of the day during their junior and senior year. There are four cohorts to which a student can apply: Technology, Engineering, Education, and Health Sciences. These credits are offered at a reduced rate, ranging between \$700-\$930 per semester. A student successfully completing this program can earn up to 30 college credits prior to high school graduation.

In an effort to accommodate students' commitments to sports, drama, band, chorus, or other high school extracurricular activities, the University has developed three new STEM Mini-Tracks beginning in the 19-20 school year. These consist of a single course per semester in Chemistry, Physics, or Mathematics.

All students must meet the eligibility requirements and complete an online application. Applicants will be reviewed based upon an established rubric.

What are the minimum requirements to apply?

- Must be a current sophomore
- Must have taken Algebra I, Algebra II, and Geometry
- Must have taken two years of a science
- Must have a positive recommendation from a high school science or math teacher
- Must have a minimum attendance record of 95%

What will be required if accepted into the STEM Magnet Program?

- A two year commitment to the program
- A three-day commitment during the first summer
- Enrollment in a minimum of four Bloomsburg University courses: two each semester with the option of one during the summer term
- Total willingness to learn and participate
- Compliance with Bloomsburg University policies
- Participation in activities throughout the year

Interested students should see Mrs. Liscum in the guidance office for more details.

# Pennsylvania College of Health Sciences

Experience college education while getting an early start on your future degree. Dual enrollment allows eligible high school students to enroll in general education courses while completing high school requirements.

Students who have completed the following may apply for dual enrollment:

- Earned cumulative GPA of 3.0 or higher
- Algebra I and Algebra II
- Biology (with lab) and an advanced science lab (with lab) such as Chemistry, Physics, or Advanced Biology
- One of the following test scores: PSAT: 1000 (combined), SAT: 1000 (combined), or ACT: 21 (composite)

Dual enrollment tuition is 50% of the normal tuition rate. Tuition for the current year is \$593 per credit hour. A 3-credit course completed in the program will cost \$899.50. Additional lab fees may apply. Payment plan options are available.

The following courses are offered online:

BIO 105 – Human Biology/Lab

BIO 230 – Immunology

BIO 250 – Nutrition for Life

CMP 150 – Digital Foundations Seminar

ECO 150 – Survey of Economics

ENG 100 – English Composition

ENG 202 – Advanced Communication

HLT 150 – Wellness for Life

HUM 210 – World Religions

MAT 150 – Clinical Mathematics for the Health Sciences

MAT 260 – Statistics

PSY 100 – General Psychology

SOC 100 – Introduction to Sociology

SOC 200 – Cultural Diversity

SPA 150 – Introduction to Medical Spanish

# Pennsylvania College of Technology

## Advanced Manufacturing

### Pre-Apprenticeship

Using a combination of self-guided online modules and instructor led labs augmented when possible by curriculum delivered by the school district, training will be provided that is aligned to standards developed by the Manufacturing Skills Institute and approved by the State of Pennsylvania for Penn College's Advanced Manufacturing Pre-Apprenticeship Program.

This program is designed to introduce the foundational concepts of advanced manufacturing. Pre-Apprentices will receive instruction in the competencies required to attain a Manufacturing Technician Level 1 (MT1) certification. Pre-Apprentices will also be provided networking opportunities with companies engaged in apprenticeship programs.

Acceptance into the program is dependent upon teacher recommendation.

#### Manufacturing Technician Level 1 – 12 Critical Technical Skills Standards

\*Approximately 100 Hours of Online Learning

- I. Measurement
- II. Algebra for Manufacturing
- III. Math for Quality
- IV. Spatial Reasoning
- V. Mechanics
- VI. Fluid Power and Thermodynamics
- VII. Electricity
- VIII. Chemistry
- IX. Manufacturing Processes and Controls
- X. Quality and Lean Manufacturing Concepts
- XI. Statistical Process Control (SPC) Concepts
- XII. Financial Literacy and Business Acumen