Millville High School Course Booklet 2025-2026

It is imperative that students take this time seriously and consider all courses they are requesting to have for the upcoming school year. Students should speak to their teachers about their recommended courses and consider their graduation requirements when scheduling. Questions pertaining to graduation requirements can be directed to the guidance department.

Course Selection Procedure

1. The course offering booklet is sent digitally to student's email addresses. If a printed copy is required, the student can pick up a copy in the Guidance office.

2. Individual grade level meetings will be held to hand out materials and discuss registration with students.

3. Students are encouraged to take home the course offering materials and speak with their parent/guardian and teachers here in school to decide on courses for next year.

4. Teachers will be asked to put course recommendations into the Sapphire system.

5. Each grade level will report to the auditorium to log-in to their Sapphire portal to register for their classes.

6. Students turn in their course requests to the school counselor digitally through the Sapphire portal.

7. The school counselor will discuss individual concerns or problems with students.

8. All teacher recommendations will be considered and student requests will be placed in the Sapphire system.

9. Requests for every course will be considered. If a course has a low number of students interested, the master schedule and course offerings will be updated accordingly.

10. Classes will be scheduled based on specific needs of each student in regards to graduation requirements, class offerings and availability.

Schedule Changes/ Withdrawal Procedures

Schedules will be handed out to each student prior to the end of the school year. Schedule changes for all elective and core courses will be available from the end of the current school year until the first day of the new school year. After the first day of school, the only change in schedule that is permitted are academic changes based on rigor; these changes can be made at any time during the first 12 days of school. An example of an academic change based on rigor would be an Honors Algebra I class change to a regular, academic Algebra I class. Written parental consent and Principal approval is also required prior to the academic schedule change. After the 12th day of school, no schedule changes will be made.

The following situations may necessitate changes:

1. If a student fails a core course~~,~~ they are encouraged to make up the failed subjects through a summer program. Some of these include approved tutoring or summer programs, or correspondence courses. All costs are to be borne by the students and /or the family. If no summer programming is taken, the failed subject will be placed on the student's schedule for the upcoming school year.
2. Changes that must be made due to schedule conflicts or errors, which are made by the school, will be made as soon as the conflict is identified.

Note:

- The inability of a student to maintain what he/she considers to be a satisfactory grade in a subject will **not** be considered a valid reason to drop the course.

- When choosing an Honors or AP Level course, keep in mind many of these courses require summer work. Any student registering for an Honors or an AP level course is expected to commit to and complete the summer work.

- Students considering playing for a DI or DII college/university, should begin planning in their 9th grade year, please refer to the Guidance Department Tab on the Millville website for additional information.

Graduation Requirements

A Millville High School diploma will be issued to each student who successfully completes the minimum requirements for graduation, as follows:

1. 27.0 credits, accumulated from specific courses passed with a grade of 70 or above in Freshman, Sophomore, Junior and Senior year.

2. All students must pass a minimum of an identified credit in each area in order to graduate (see charts).

3. State Testing (as per PDE) and Graduation Requirements

   - Students must meet course completion and grade requirements of the school district, and they must demonstrate proficiency in Literature, Algebra I and Biology as measured by the Keystone Exams OR a pathway outlined in ACT 158 (see flow chart on page 4) . Students must complete a locally developed assessment of U.S. history, government and civics.

Note:

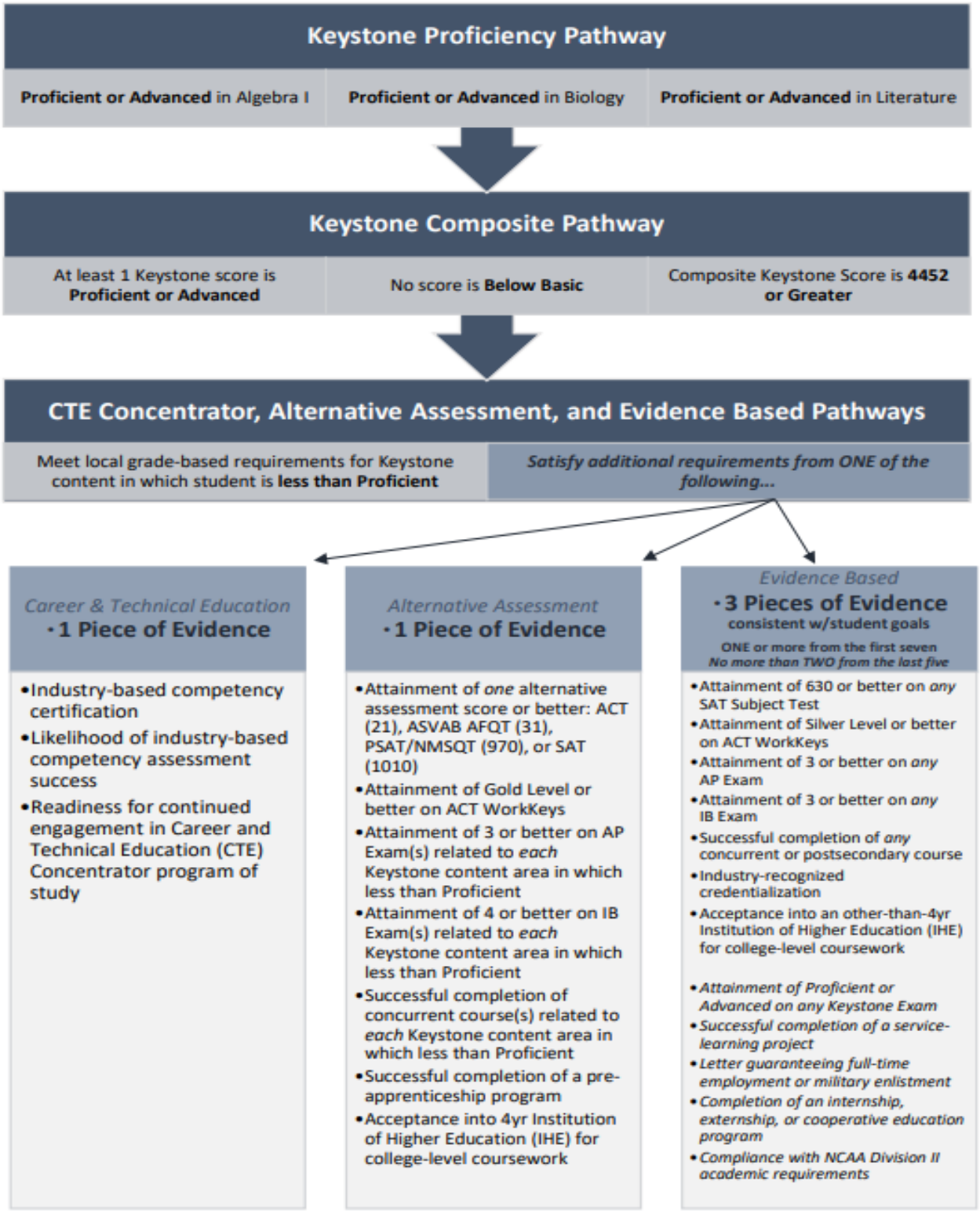
- **Any student failing to demonstrate proficiency on the Keystone Exams will be placed in a supplemental instruction course the following semester during** Activity Period.

Credit Requirements

Subject Area	Required Credits
English	4.0
Mathematics	4.0
Science	3.0
Social Studies	3.0
World Language	1.0
Business Software and Internet Application	.50
Wellness (.50 Health 10th grade & .50 PE)	1.0
Personal Finance	.50
Electives	10.0
TOTAL	27.0 credits

ACT 158 Graduation Pathways Graphic

Act 158 Pathway Graphic



Advanced Placement (AP) Exam: Score of 3 on an AP Exam related to one of the following courses		
Algebra Equivalent	**Literature Equivalent**	**Biology Equivalent**
AP Calculus AB	AP English Language & Composition	AP Biology
AP Calculus BC	AP English Literature & Composition	AP Environmental Science
AP Computer Science A		AP Chemistry
AP Computer Science Principles		AP Physics 1: Algebra-Based
AP Statistics		AP Physics 2: Algebra-Based
AP Physics 1: Algebra Based		AP Physics C: Electricity & Magnetism
AP Physics 2: Algebra Based		AP Physics C: Mechanics
AP Physics C: Electricity & Magnetism		
AP Physics C: Mechanics		
AP Chemistry		

International Baccalaureate (IB) Exam: Score of an IB Exam related to one of the following courses:		
Algebra Equivalent	**Literature Equivalent**	**Biology Equivalent**
IB Mathematics: Analysis & Approaches SL	IB Language A: Literature	IB Biology
IB Mathematics: Analysis & Approaches HL	IB Language A: Language & Literature	IB Chemistry
IB Mathematics: Applications & Interpretation SL	IB Literature & Performance	IB Design Technology
IB Mathematics: Applications & Interpretation HL		IB Physics
IB Computer Science		IB Sports, Exercise & Health Science
IB Chemistry		
IB Physics		

Alternative Pathways Not Listed Above:

In addition to the ACT 158, pathways described above there are two (2) other provisions available to meet requirements:

- Graduation by IEP team decisions based upon academic goals
- Superintendent's waiver for students with extenuating circumstances (5%)

Note:

- Any student that does not meet the Keystone Proficiency Pathway, Keystone Composite Pathway, CTE Concentrator or Alternative Assessment will complete a graduation project to meet the Evidence Based Pathway.

PIAA Eligibility

Students must be enrolled in and completing at least **4.0** full credits at the Junior/Senior High School, through the Millville Virtual Academy (MVA) or through approved dual enrollment in order to be eligible to play a PIAA sport.

NCAA

Students that are interested in playing a sport in college at a DI or DII school, must speak to guidance as soon as possible to ensure that the courses the student is taking align with the NCAA requirements.

Grade Weighting

Courses that are more rigorous are given more weight. The system of grade weighting has been approved by the Board of School Directors. The student's grades will be multiplied by 1.06 for Honors Courses and 1.10 for Advanced Placement classes listed below. This grade will be figured into the GPA (grade point average) and, therefore, the class rank.

Honors (1.06)
Honors English 9
Honors English 10
Honors English 11
Honors Algebra II
Pre-Calculus/Trigonometry
Honors Geometry
Honors Earth Science
Honors Chemistry
Honors Physics
Spanish III
Spanish IV
French III
French IV

* Advanced Placement (1.10)
AP English 12
AP European History
AP Calculus AB
AP Calculus BC
AP Government & Politics
AP Biology
French V
Spanish V

COURSE DESCRIPTIONS

The following pages of the "Course Catalog" contain brief descriptions of the high school course offerings. The availability of elective courses is dependent upon student enrollment. A course may be canceled if there are not enough students enrolled in the course. The courses in the following section are *not* listed according to difficulty. Students should be sure to select courses at appropriate levels. Discussions with teachers and the school counselor can help students to choose the most beneficial courses.

ENGLISH DEPARTMENT

109 HONORS ENGLISH 9 (9th grade) (FULL YEAR 1.0 CREDIT)

The 9th grade Honors English class is, at its basis, a survey course of different styles of fiction and nonfiction works of literature. It is also a precursor to the AP© and Honors English classes in 11th and 12th grade. Students in this class must realize that they will be expected to perform above and beyond typical classroom expectations. They must be prepared to discuss in – depth reading passages and also be prepared to set aside time in order to read and understand novels assigned to them. It is expected that students already have a working knowledge of the basics of novel structure: plot, character, theme etc. The purpose of this course is to further the students' knowledge of the various forms of literature. Students will read both fiction and nonfiction selections taken from poetry, short stories, and essays, to name a few. Besides the textbook, students will read, as a class, a selection of 3 - 4 novels throughout the year. Active participation is mandatory. A final exam is required.

Prerequisites: 1. Recommendation of current instructor. 2. 90% or higher average in current English course. 3. Students must agree to complete all summer reading, paper, and assignments prior to the first day of school (failure to do so will result in removal from Honors English). It's imperative that the summer assignment is completed. The first 2-3 weeks of class revolve around a finished assignment.

113 ACADEMIC ENGLISH 9 (9th grade) (FULL YEAR 1.0 CREDIT)

The purpose of this course is to further the students' knowledge of the various forms of literature. Students will read both fiction and nonfiction selections taken from poetry, short stories, and essays, to name a few. Besides the textbook, students will read a selection of novels both as a class and individually. The writing part will deal with in-class and out-of-class essays that will be assigned and reviewed at different times throughout the year. Through these various activities, students will strengthen their skills in reading – understanding and responding analytically to both informational text and pieces of literature. Students will also be expected to strengthen their writing skills directed to different purposes and audiences. A midterm and final are required.

125 HONORS ENGLISH 10 (10th grade) (FULL YEAR 1.0 CREDIT)

This course begins specific preparation for AP testing offered in grade 12. The year will be devoted to reading and writing about American literature from the beginning of the country to the present. Students will write about American authors including, but not limited to, Hawthorne, Twain, Steinbeck, Miller, Fitzgerald and Salinger. It is assumed that the students taking this course will have already cultured habits of reading, writing, and thinking. Reading accurately, engaging in intelligent discussion (active participation is mandatory), accepting constructive criticism from teachers and peers, and working hard to catch up with these skills is an imperative part of this course. Research projects, numerous short essays, 3-5 page analytical essays, continuation of the writing portfolio and a final exam are all required.

Prerequisites: **(1)** 90% or higher average in present English course. **(2)** A summer assignment is included.

110 ACADEMIC ENGLISH 10 (10th grade) (FULL YEAR 1.0 CREDIT)

Composition is integrated with a study of American literature starting from Early American perspectives to the present. Students will explore, in-depth, American literature from the beginning of the country to the present, focusing on novels, short stories, and poetry from various American authors including, but not limited to, Franklin, Jefferson, Twain, Steinbeck, and Miller. Vocabulary instruction, as well as test preparation, will be incorporated into the course. Oral communication skills and listening skills will also be addressed in this course. Active participation in class discussions is integral to successful completion of this course. Students are required to complete a final exam as well as the major components of career exploration.

105 HONORS/PRE-AP ENGLISH 11 (11th grade) (FULL YEAR 1.0 CREDIT)
This class is a challenging and stimulating experience that requires more effort, gives greater opportunity for individual accomplishment, and penetrates deeper in both the content of literature and analysis of that content than does the academic course. The emphasis is on British literature and includes authors studied in the academic course plus numerous others such as Joyce, Woolf and Achebe. Skills used in Advanced Placement English classes will also be introduced in order to prepare students for the possibility of taking the Advanced Placement English Literature and Composition class offered their senior year. Writing essays will develop skills to the point where successful college work will be expected during the summer before the course convenes. Students are expected to actively participate in class discussion, maintain their junior portfolio (junior class requirement), and complete a midterm and final exam.
Prerequisites: (1) 90% or higher in present English class. (2) A summer assignment is included.

106 ACADEMIC ENGLISH 11 (11th grade) (FULL YEAR 1.0 CREDIT)
This is a survey course which is based in literature, with a focus on writing as well. The literary part deals with different genres found in British literature, beginning with the Anglo-Saxon period. Students will learn how the history of England directly and indirectly influenced sources which formed a basis for our literature today. Besides the textbooks, students will read a selection of novels both as a class and individually. The writing part will deal with in-class and out-of-class essays that will be assigned and reviewed at different times throughout the year. Through these various activities, students will strengthen their skills in reading – understanding and responding analytically to both informational text and pieces of literature. Students will also be expected to strengthen their writing skills directed to different purposes and audiences. A mid-term, final exam and a portfolio are required.

101 ADVANCED PLACEMENT ENGLISH 12 (12th grade) (FULL YEAR 1.5 CREDITS)
The AP English course is a challenging and stimulating experience that requires more effort, gives greater opportunity for individual accomplishment, and penetrates deeper into both the content of literature and the analysis of that content than does the general or academic course. The emphasis is on World Literature and includes authors studied in the academic course plus numerous others such as Ibsen, Chopin, ~~Morrison, Homer~~, Dante, O'Brien and Shakespeare. All genres will be represented, and works will be pulled from both fiction and non-fiction. Weekly essays will develop skills to the point where successful college writing should pose no problem. First reading of major works will be expected during the summer before the course convenes. AP essay test questions and multiple-choice questions will be used, when appropriate, to familiarize students with the format of timed-writing exercises. Students will have the opportunity to take the AP exam for college credit. AP English students are expected to actively participate in class discussions and complete a required final exam (the AP English test may be substituted in lieu of the final exam). In addition, a senior project is a required element of this course.
Prerequisites: **(1)** 90% or higher average in present English course. **(2)** A summer assignment is included.

100 ACADEMIC ENGLISH (12th grade) (FULL YEAR 1.0 CREDIT)
This course includes a study of world literature. Students will analyze multiple genres of literature from past and present, including novels, poetry, plays and short stories. Authors discussed within the year are written mostly by an assortment of authors from varying time periods such as Homer, Shakespeare, O'Brien, and Albom, among others. Students will also analyze current events within the school year and evaluate controversial issues both in the United States and the world at large. Composition of varied styles is integrated with a study of world literature. Active participation in class discussions is expected. A final exam is also a required element of this course. In addition, a senior project is a required element of this course.

132 APPLIED ENGLISH (11th) (FULL YEAR 1.0 CREDIT)
The goal of this class is for the student to graduate with the English knowledge and skills needed to qualify for and succeed in the post-secondary job training or education necessary for their chosen career, whether that career path deals with technical/vocational programs, community college, apprenticeships and/or significant on-the-job training. Students will be given tools to communicate in a professional manner and to understand that workplace expectations differ from personal social situations. Because of this, writing, reading, and communication activities will be focused on real-world situations. Writing will be functional, applicable writing; reading will deal with contemporary fiction and nonfiction that students see on a daily basis, and communication will include not only verbal and written skills but also the "soft" skills that are required in a work environment.

13X APPLIED ENGLISH (12th grade) (FULL YEAR 1.0 CREDIT)
The goal of this class is for the student to graduate with the English knowledge and skills needed to qualify for and succeed in the post-secondary job training or education necessary for their chosen career, whether that career path deals with technical/vocational programs, community college, apprenticeships and/or significant on-the-job training. Students will be given tools to communicate in a professional manner and to understand that workplace expectations differ from personal social situations. Because of this, writing, reading, and communication activities will be focused on real-world situations. Writing will be functional, applicable writing; reading will deal with contemporary fiction and nonfiction that students see on a daily basis, and communication will include not only verbal and written skills but also the "soft" skills that are required in a work environment.

ENGLISH ELECTIVES

130 CREATIVE WRITING (9th - 12th grade) (SEMESTER .50 CREDIT)
Creative Writing offers instruction in the various forms of imaginative writing. Emphasis is placed on experiencing writing as a tool for intellectual exploration, self-discovery, and creative expression. This course is designed to rigorously improve the sophistication, style, and voice of each writer. Students must be willing to share their work with the class and complete projects independently or collaboratively. Students will be required to keep a unique version of a journal in order to spark imagination and bring out inner creativity. The goal for Creative Writing is to acquire skills that enable students to express themselves with originality, creativity, and clarity in stories, poetry, personal essays and projects.

104 JOURNALISM (9th - 12th grade) (SEMESTER .50 CREDIT)
Journalism is a semester course designed for students interested in newspaper journalism and developing their skills as a writer. The course explores the contemporary media and the ethical responsibility issues inherent in the press today. Students will learn the fundamentals of news, feature, editorial and sports writing. Copy reading, news style and editing will be stressed. Students will create numerous original stories using varied structures and writing techniques. Students will also learn to create computer generated layouts and graphics with the goal of creating the initial editions of a school newspaper.

118 YEARBOOK (9th- 12th grade) (YEAR 1.0 CREDIT)

Students are tasked with producing a timeless, creative, and innovative publication which will record our school's community, memories, and events. Yearbook includes writing, photography, research, design, layout, and editing. Beyond the class, yearbook is a business. Students will learn valuable business skills such as budgeting, promotion, advertising, marketing, customer service, and market research.

120 EXPLORING WRITING (11th-12th grade) (SEMESTER .50 CREDIT)

In this course we will discuss writing as a process and the different styles of writing that are encountered both in the academic and professional worlds. Beyond this, the course will look to provide students with the writing skills necessary for success in the upper-levels of high school, college, and beyond. Students will actively apply the writing skills presented in this course in a hands-on manner by exploring (but not being limited to): pre-writing, writing, revising, editing, SAT English Prep, MLA, APA, technical writing as well as expository, narrative and persuasive writing. The rigor of this course is designed for juniors and seniors to expand upon the writing skills acquired earlier on in high school.

121 Dystopian Literature (11th-12th grades)

Dystopian Literature is a semester-long survey course in reading and writing. The class focuses on selected works of dystopian literature ranging from (but not limited to) *Scythe* by Neil Shusterman, *The Measure* by Nikki Erlick, *Uglies* by Scott Westerfeld, and *The Giver* by Lois Lowry. Other supplemental materials (movies, articles, short stories, etc.) may also be used in the course as well. Students are expected to critically read all works presented and write cohesive, clear, and well-structured analyses/critiques about what they have read. Students will write a variety of rhetorical modes and for a variety of purposes including narration, information, and persuasion. Students' papers will reflect a sophisticated level of original analysis and include references to the read text, or to outside sources where appropriate. Students will also complete creative writing assignments along with pragmatic projects to show mastery and understanding of the material presented while also connecting it to one's life and modern society.

MATHEMATICS DEPARTMENT

HONORS Sequence		ACADEMIC 1 (College Bound) Sequence	ACADEMIC 2 Sequence
9th	Honors Algebra II	Algebra I Part B	Algebra I Part B
10th	Honors Geometry	Geometry	Geometry
11th	Pre-Calculus/Trigonometry	Algebra II	Applied Math
12th	AP Calculus AB	Pre-Calculus/Trigonometry or Prob & Stats	Accounting/ Prob & Stats

411 ALGEBRA I, PART B (FULL YEAR 1.0 CREDIT)

In this course, students will build upon the algebraic skills learned in Algebra I Part A. These topics will include operations with real numbers and expressions, linear equations, linear inequalities, functions, coordinate geometry, and data analysis. Special emphasis will be placed on writing equations and inequalities for real world applications. **Students will be required to take the Algebra I Keystone exam at the end of this course.**

439 HONORS ALGEBRA II (FULL YEAR 1.0 CREDIT)

Through this course, students will expand their knowledge of properties of functions and methods for solving equations including the following: polynomial, quadratic, complex, rational, radical, exponential, logarithmic and inverse.
Prerequisites: Students need (1) a 93% or above in Honors Algebra 1 and students must (2) score proficient or advanced on the Algebra I Keystone Exam to enroll.

403 GEOMETRY (FULL YEAR 1.0 CREDIT)
This course is designed to emphasize the study of plane and solid figures and their properties. Students will move beyond the basics concepts of geometry to include reasoning and proof, perpendicular and parallel lines, congruent and similar figures, properties of triangles and quadrilaterals, right triangle trigonometry, and circles.
Prerequisites: Successful completion of Algebra I, Parts A and B.

406 HONORS GEOMETRY (FULL YEAR 1.0 CREDIT)
This course is a rigorous presentation of geometric concepts designed to emphasize the study of plane and solid figures and their properties. Students will be challenged to move beyond the basic concepts of geometry to include reasoning and proof, perpendicular and parallel lines, congruent and similar figures, properties of triangles and quadrilaterals, right triangle trigonometry, and circles.
Prerequisites: Students need a 93% or above in their most recent math course to enroll.

404 ALGEBRA II (FULL YEAR 1.0 CREDIT)
Through this course, students will expand their knowledge of properties of functions and methods for solving equations including the following: polynomial, quadratic, complex, rational, radical, and inverse.
Prerequisites: Successful completion of Algebra I, Parts A and B. This course is recommended for students planning to attend college.

401 PRE-CALCULUS/TRIGONOMETRY (FULL YEAR 1.0 CREDIT)
This course is designed to provide the necessary foundation for students intending to continue onto calculus. The course will emphasize mathematical thinking, the use of mathematical models, and the understanding of mathematical functions and graphs. Specified topics include functions and their graphs, polynomial, exponential, logarithmic, and trigonometric functions.
Prerequisite: must have (1) successfully completed: Algebra I, Algebra II, and Geometry. (2) Students need a 93% or above in their most recent math course to enroll.

402 APPLIED MATH (11th or 12th grade) (FULL YEAR 1.0 CREDIT)
This course is designed to develop students' problem-solving skills further through practical applications. Students will engage in a variety of activities and projects related to algebraic and geometric concepts. This course is an alternative to Algebra II and is intended for students who are not planning to enroll in college.
Prerequisites: Completion of Algebra I and Geometry or equivalent.

400 ADVANCED PLACEMENT CALCULUS AB (12th grade) (FULL YEAR 1.5 CREDITS)
This course constitutes the equivalent of a standard college Calculus I course. Both differential and integral calculus in the one-dimensional case are treated. The course outline closely follows that suggested by the Advanced Placement board in its AP course description, and the Advanced Placement test is available for possible college credit. Students attempting this course should feel confident in their algebra and trigonometry skills.
Prerequisites: Students need a grade of 93% or above in Pre-Calculus/Trigonometry.

4003 <u>ADVANCED PLACEMENT CALCULUS BC</u> (12th grade) (FULL YEAR 1.5 CREDITS)

This course constitutes the equivalent of a standard college Calculus II course. Both differential and integral calculus are treated as well as sequences and series. The course outline closely follows that suggested by the Advanced Placement board in its AP course description, and the Advanced Placement test is available for possible college credit.

<u>Prerequisites</u>: Students need a grade of 93% or above in AP Calculus AB

440 <u>Introduction to PROBABILITY & STATISTICS</u> (SEMESTER 1.0 CREDIT)

This course provides students with a foundational understanding of probability and statistics, preparing them to interpret and analyze data, make informed decisions, and solve real-world problems. Aligned with the Pennsylvania Department of Education (PDE) Mathematics Standards, students will explore key concepts such as descriptive statistics, inferential statistics, probability theory, and data representation.

Students will engage in hands-on activities, collaborative projects, and the use of technology to collect, organize, and interpret data sets. Emphasis will be placed on developing critical thinking skills and applying mathematical reasoning to practical scenarios in fields such as science, business, and social studies.

This course is designed for high school students seeking to strengthen their quantitative reasoning and prepare for advanced studies in mathematics, science, or data-intensive fields. No prior coursework in probability or statistics is required.

SCIENCE DEPARTMENT

314 EARTH SCIENCE (9th grade) (FULL YEAR 1.0 CREDIT)
Academic earth science should provide the student with a basic understanding of the earth and environmental science. Using technology and practical problem solving, the students will better understand the world around them. Possible topics will include: Geology, Astronomy, Meteorology, Oceanography and Ecology.

313 HONORS EARTH SCIENCE (9th grade) (FULL YEAR 1.0 CREDIT)
Honors Earth Science is an accelerated course with a rigorous course load that will provide the student with an in-depth understanding of the earth and environmental science. Using technology and inquiry based learning; the students will better understand the world around them. Possible topics will include: Geology, Astronomy, Meteorology, Oceanography and Ecology.
Prerequisite: A student must have received a 93% or above in Science 8 or an A/B in Honors Science 8 with teacher recommendation.

307 HONORS BIOLOGY 10 (10th grade) (FULL YEAR 1.50 CREDIT)
Honors Biology is an academically rigorous course designed for students who plan to continue their education beyond high school, especially if they plan to pursue a career in a science or medical field. Topics studied include biochemistry, cell structure and function, genetics, and evolution as well as various projects and enrichment activities. In this course there is a focus on lab skills, techniques, and scientific writing through lab reports.
Prerequisite: A student must have received a 93% or above in Earth Science or an A/B in Honors Earth Science as a freshman. With teacher recommendation.

306 ACADEMIC BIOLOGY 10 (10th grade) (FULL YEAR 1.0 CREDIT)
This course is designed as an overview of the study of life. Topics studied are: Chemistry/biochemistry, cells, genetics, evolution, microorganisms, plants, and human biology. The course will involve various labs and projects. This course is designed in preparation for the Biology Keystone Exam at the end of the school year.

305 HONORS CHEMISTRY (11th grade) (FULL YEAR 1.5 CREDITS)
Honors chemistry is a year long course. This course is a study of basic laws of chemistry covering common elements on the periodic table, their structure, interactions, and energy relationships. The course is accompanied by work in the mathematical solution of chemical problems, and laboratory use of experiment data. This course is especially important for students who are planning on attending college in a scientific or health-related field. The design of this course is intended to help students prepare for rigors of lab science courses that they may encounter in college at a fast pace. Students should expect a demanding daily workload that will include worksheets, review, and laboratory write ups as well as quizzes and tests to assess understanding and retention.
Prerequisites: Students must have received a 93% or above in Academic Biology 10 or A/B in Honors Biology 10 to take this course. A summer assignment is included.

303 CHEMISTRY (FULL YEAR 1.0 CREDIT)
This course is a generalized chemistry course designed for students who do not plan to enter college, or for those who plan to choose non-science and math majors in college. It will cover all of the relevant areas in chemistry, with a minimal emphasis placed on mathematical calculation.
Prerequisites: Students must have completed Algebra 2 AND received a B or higher in Biology.

300 PHYSICS (FULL YEAR 1.0 CREDIT)
This science class is for the college-bound, science major student. Physics is the study of matter and energy and the interactions between them. The areas of study will include but are not limited to kinematics, force mechanics, thermodynamics, vibrations and waves, optics, electromagnetism, relativity, and quantum mechanics. An emphasis on technical writing in the APA style will also be present in this course to better help

students succeed at the college level. This course is ran as close to a college level course as is manageable. The laboratory work is both qualitative and quantitative.
Prerequisites: Students must successfully complete Algebra II, Geometry and Trigonometry to enroll.

340 ENVIRONMENTAL SCIENCE (11th or 12th grade) (FULL YEAR 1.0 CREDIT)
This course is designed to emphasize the critical relationship between humans and the environment in which we live. Students will analyze environmental issues and attempt to offer practical recommendations for solving these problems. Hands-on lab investigations and using an inquiry based approach to science are major components of this course.

301 APPLIED SCIENCE (11th or 12th grade) (FULL YEAR 1.0 CREDIT)
This course is designed for junior and senior students not intending to enter college. The class will investigate a variety of science topics that relate to daily life. Assessments will include hands-on projects, simulations, as well as written assignments**.**

312 ADVANCED PLACEMENT BIOLOGY (12th grade) (FULL YEAR 1.5 CREDITS)
This course is designed for students who will be pursuing a career in the science field. It will assist in preparing students for college level work. The material is presented in greater detail and at a faster pace than other biology courses. Students taking this course may choose to take an AP exam at the end of the course for potential college credit.
Prerequisite: Students who enroll in this class should have received a 93% or above in General Chemistry or an A/B in Honors Chemistry as a junior. Students should also have taken precalculus and have a science teacher recommendation.

SCIENCE ELECTIVES

998 ANATOMY & PHYSIOLOGY (SEMESTER .50 CREDIT)
This is an introductory course in human anatomy and physiology, it has been credited for students who plan on pursuing health or science related majors in college – pre-med, physical therapy, physician assistant, nursing, biology, etc. The study of anatomy is one of the oldest branches of science. In this class, we will explore the basics of human anatomy and physiology, also known as the study of the structure and function of the human body. The word anatomy comes from the Greek word “anatome” which means dissection, and the hands-on experience of dissection is an integral part of this course.
Prerequisite: Students must have earned an A or B in Biology 10 to enroll in this class.

311 MICROBIOLOGY AND GENETICS (10th- 12th grade) (SEMESTER .50 CREDIT)
This is an elective course that is designed for students that are interested in microbiology and furthering their knowledge in the field of biology. Students will explore such topics as microscopy (using a microscope), bacteria, viruses, protists, and fungi. There will be a major focus on DNA science and genetics. This course will incorporate lab work, projects, and tests/quizzes. Students interested in this course should be have taken biology or be currently enrolled in biology.

304 FORENSICS (11th or 12th grade) (SEMESTER .50 CREDIT)
This elective course is for the science-minded junior or senior. The course will contain an overview of various forensic techniques, as well as an evaluation of their reliability and effectiveness. The use of critical thinking skills will be a focus of the course**.**
Prerequisite: Students must have at least a 78% in all previous science courses to enroll.

309 METEOROLOGY (10th, 11th or 12th grade) (SEMESTER .50 CREDIT)
This elective course will give a basic overview of meteorology and its applications in the real world. It will cover topics such as: weather instrumentation, reading weather maps and forecasting. It has been designed for juniors or seniors looking to enhance their science knowledge.

310 ASTRONOMY (10th, 11th & 12th grade) (SEMESTER .50 CREDIT)
This elective course will give a basic overview of astronomy. It will cover topics such as: galaxies, black holes, stars, planets and dark matter. It has been designed for sophomores, juniors and seniors looking to enhance their science knowledge. An A or B in previous Science class is preferred as the textbook requires an advanced reading level.

SOCIAL STUDIES DEPARTMENT

249 U.S. HISTORY II (9th grade) (FULL YEAR 1.0 CREDIT)
This course traces American History from the post-civil war era to the present. The emphasis is on incidents and trends that shaped American culture.

248 WORLD CULTURES (10th grade) (FULL YEAR 1.0 CREDIT)
This course is designed to teach students about the birth and foundational development of "Western culture", and its relationship with other major cultures around the world, including: Middle Eastern, African, and Eastern (China and India). Students will explore how that role and relationship has changed from ancient times to the global world of today.

204 U.S. GOVERNMENT (11th grade) (FULL YEAR 1.0 CREDIT)
This course is designed to teach students the principles of the American democratic system of government. Included are studies on the Constitution and Bill of Rights, federal, state and local government, as well as the three branches of government. Special attention is given to the study of current government officials and events to make the class relevant to the student. Emphasis is also placed on the importance of citizenship and the development of responsible citizens.

205 ADVANCED PLACEMENT U.S. GOVERNMENT & POLITICS (FULL YEAR 1.5 CREDITS)
This college level AP course explores the structure and dynamics of American national government, providing a critical examination of the constitutional underpinnings of our government, political beliefs and behaviors, political parties, interest groups, the mass media, public policy, and individual civil liberties. We will study the strategies, roles, and limitations of both governmental elites and ordinary citizens. Students will become familiar with various theoretical perspectives and explanations for various behaviors and outcomes in the political process. Students will learn in a familiar format as one might see in college.

210 ADVANCED PLACEMENT EUROPEAN HISTORY (FULL YEAR 1.5 CREDITS)
This challenging, college level course will introduce students to modern European history. It will cover the fundamental development of the western tradition from the Renaissance to the modern global world of today. Students will explore topics such as the rise of Christianity, the growth of European democracy, humanism, industrialism, feminism, the scientific revolution, the blossoming of western art, and much more. Students will look at the many challenges that have faced Europe throughout history, such as the rise of communism and fascism, the relationship between Europe and the United States, and the role of the European Union today.

Upon successful completion of the course, students will have the opportunity to take the Advanced Placement test for college credit.

CONTEMPORARY ISSUES (9th grade) **(SEMESTER .50 CREDIT)**

Contemporary World Issues is designed to provide students with a comprehensive understanding of the pressing global challenges of our time. This interdisciplinary course will explore a range of topics including but not limited to: climate change, global inequality, geopolitical conflict, migration, cyber security, and the impact of technology on society. Through a combination of lectures, discussions, and interactive activities, students will examine the root causes of these issues and the various perspectives surrounding them. The course will also consider the role of international organizations, governments, and civil society in addressing these challenges and the potential for collective action to create lasting solutions. Students will receive a total of .50 credit and earn a letter grade.

*This course is specifically for students that successfully completed Honors Algebra 1 in 8th grade and scored proficient or advanced on the Algebra Keystone exam.

SOCIAL STUDIES ELECTIVES

208 ANTHROPOLOGY **(SEMESTER .50 CREDIT)**

This course will examine the nature, scope, and methods of anthropology past, present, and future, as well as the values and benefits of its study. In the first marking period students will study Archaeology and its methods. In the second, we will look at Anthropology from both the physical and the cultural perspectives. Anthropology is beneficial for students interested in any field of study, and could be especially benefitting behavioral science students and students of the humanities.

201 EASTERN CULTURES **(SEMESTER .50 CREDIT)**

This class involves the history and culture of ancient China, India, Australia, and Africa. As the world continues to globalize, the need for Americans to understand the peoples and histories of the "world community" has never been more necessary. This class offers students the opportunity to explore in detail the various cultures of the East including our complicated relationship with them. This class is designed to accommodate all students from freshmen to seniors, and would be a tremendous benefit to any student planning to go into business, attend college, go into the military, or enter the workforce.

203 MYTHOLOGY AND PHILOSOPHY **(SEMESTER .50 CREDIT)**

This class will involve a detailed study of the rich history and meaning behind the ancient stories and legends of our Western Culture; the stories we call Myths. The focus of our study will be on the myths of the Greeks, Romans, Germanic peoples (Norse), Celts, and Slavs, but will also involve myths from around the world including: Native American, Egyptian, African, Native Australian, and Polynesian. In the second half of the semester students will be introduced to Western Philosophy, starting with its conception out of the ancient Greek myths to the 21st Century. Finally the class will look at the incredible modern revival mythology through books, music, and movies, as young people seek deeper meaning in the ever-changing, globalized world.

202 CONTEMPORARY WORLD ISSUES **(SEMESTER .50 CREDIT)**

Contemporary World Issues is designed to provide students with a comprehensive understanding of the pressing global challenges of our time. This interdisciplinary course will explore a range of topics including but not limited to: climate change, global inequality, geopolitical conflict, migration, cyber security, and the impact of

technology on society. Through a combination of lectures, discussions, and interactive activities, students will examine the root causes of these issues and the various perspectives surrounding them. The course will also consider the role of international organizations, governments, and civil society in addressing these challenges and the potential for collective action to create lasting solutions.

ELECTIVES

Agriculture Department

AG 101 INTRODUCTION TO AGRICULTURE (YEAR 1.0 CREDIT)
Introduction to Agriculture, Food, and Natural Resources (AFNR) introduces students to the range of agricultural opportunities and the pathways of study they may pursue. This class incorporates science, mathematics, reading, and writing components into the context of agriculture. Students use this course's introductory skills and knowledge throughout the curriculum. Woven throughout the course are activities to develop and improve students' employability skills through practical applications. Students explore career and post-secondary opportunities in each area of the course. While surveying the opportunities available in agriculture and natural resources, students learn to solve problems, research, analyze data, work in teams, and take responsibility for their work, actions, and learning. Students investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community.

AG102 WILDLIFE MANAGEMENT (10th in program) (SEMESTER .50 CREDIT) The goal of this course is to provide students with knowledge of wildlife management and conservation. It is ideal for any student interested in a career in the field of wildlife biology as well as students that enjoy hunting, fishing, trapping, or other outdoor recreation. Topics to be covered include the history of wildlife management, identification of mammals, fish and birds found in Pennsylvania, management techniques for the preservation and control of wildlife populations, and habitat improvement practices will be studied. Students will examine these concepts through the Eels in the Classroom Program. Students enrolled in this course will also receive the opportunity to earn the Ducks Unlimited Ecology Certification.

AG107 NATURAL RESOURCE MANAGEMENT (9th in program) (SEMESTER .50 CREDIT)
This experiment-heavy course is designed to make students more aware of the needs for conservation of our natural resources; water, soil and air. Topics to be covered include soil quality and conservation, water quality and monitoring, air pollution, land pollution, alternative energy and fuels, and sustainable agriculture. Students will examine these concepts through the Eels in the Classroom Program and other hands-on activities.

AG111 BUILDING TRADES (12th in program) (SEMESTER .50 CREDIT)
At some point, you will most likely not be living with your parents and you will need some basic life skills in order to be successful. Considering taking Building Trades also known as “Living on Your Own”! Topics to be taught during this course can be applied to everyday life, not just agriculture. You will learn basic plumbing techniques, residential electrical wiring, safe tractor driving, and concrete masonry. Students enrolled in this course will also receive the opportunity to earn the OSHA-10 Agriculture Certification and/or the National Safe Tractor and Machinery Operation Program (NSTMOP) Certification.

AG 113 SMALL GAS ENGINES (9th in program) (SEMESTER .50 CREDIT)

Do you enjoy working on cars at home or have hobbies like racing dirt bikes or repairing go karts? Maybe you drive to school and just want to learn more about how to care for your vehicle so you don't get ripped off at the mechanic's. Then, Small Gas Engines in the class for you! Students in this class will learn about the major engine systems: fuel system, governor system, compression system, ignition/electrical system, and the cooling & lubrication system as they disassemble and reassemble a small gas engine. Students enrolled in this course will also receive the opportunity to earn the OSHA-10 Agriculture Certification and/or the Briggs and Stratton Master Service Technician Certification.

AG104 HORTICULTURE (10th in program) (YEAR 1.0 CREDIT)

Is your green thumb more brown than green? Let's fix that! Topics to be taught in this class will include plant anatomy, plant development and growth, soils, plant reproduction, plant identification, greenhouse management and insect and disease control. Students may also have the opportunity to learn basic floral design skills so they can create their own corsages, boutonnieres, and bouquets. Students in this class will also play a key role in organizing a spring plant sale. Students enrolled in this course will also receive the opportunity to earn three NOCTI micro-credentials in the areas of plant propagation, soils, and business and retailing.

AG 115 ANIMAL & VETERINARY SCIENCE

Do you currently raise or hope to someday raise cows, horses, sheep, goats, pigs or chickens? Have you always dreamed of a career working with animals? The primary goal of the this course is to expose students to agriculture, animal science, and related career options. Throughout the course, students investigate the consumer perceptions and preferences related to animals in local, regional, and global markets. Students gain knowledge and skills related to animal anatomy, physiology, behavior, nutrition, reproduction, health, selection, and marketing through hands-on activities, projects, and problems. By mimicking work similar to that of animal science specialists, such as industry personnel, livestock producers, veterinarians, and zoologists, students learn to document work, solve problems, and communicate solutions to peers and members of the professional community. Students enrolled in this course will also receive the opportunity to earn the Beef Quality Assurance Certification.

The ASA course includes:

- Background and social issues of animal science
- Handling and caring for animals safely
- Anatomy and physiology
- Nutrition
- Reproduction
- Genetics
- Animal health
- Animal selection, products, and marketing

AG103 FORESTRY (10th in program) (SEMESTER .50 CREDIT)

This course is designed to make students more aware of the latest concepts in forestry science. Topics to be covered include forest regions, forest management, dendrology, forest products and forest technologies. For portions of this class, students will work outside to identify trees and learn to take tree measurements. Lab experiments in this class will focus on forest products including making paper and maple syrup!

AG112 FOOD SCIENCE AND SAFETY (9th in program) (SEMESTER .50 CREDIT) This course provides learning experiences in food science and safety, which allows students to apply scientific knowledge and processes to the development and preservation of food products. Issues of food science and safety are examined from a scientific and technological perspective. Students critically analyze information to evaluate and draw conclusions on the appropriate use of technology in food science and safety

practices. Units of instruction include: principles of food preservation, food processing, biochemistry, food selection, and consumer health. Students develop personal viewpoints on societal issues concerning the development and preservation of food products, and make career plans in the food industry.

Art Department

901 PAINTING I **(SEMESTER .50 CREDIT)**
Students will be introduced to and apply color theory and specific painting techniques of pastel, water color, tempera, and acrylic paints. There will be readings on Art History painting styles and vocabulary. Students will create paintings: thematic, personal, problem solving, and political. Testing on Art History Styles and Vocabulary.

902 PAINTING II **(SEMESTER .50 CREDIT)**
Students should demonstrate the ability to work independently. Students will continue to build upon their color theory and specific painting techniques of pastel, water color, tempera, and acrylic paints. There will be readings on Art History painting styles and vocabulary. Students will create paintings: thematic, personal, problem solving, and political. Testing on Art History Styles and Vocabulary.

929 PAINTING III **(SEMESTER .50 CREDIT)**
Students should demonstrate the ability to work independently. This is an advanced level course. Students will continue to build upon their color theory and specific painting techniques of pastel, water color, tempera, and acrylic paints. There will be readings on Art History painting styles and vocabulary. Students will create paintings: thematic, personal, problem solving, and political. Testing on Art History Styles and Vocabulary.
Prerequisite: Students must complete Paining II to enroll in this course.

903 DRAWING I **(SEMESTER .50 CREDIT)**
Students will be introduced to sight drawing. Areas covered are pencil, pen and ink, scratch board, charcoal, pastel, and marker as well as printmaking. Assignments will begin with realism and evolve to conceptual work. Areas of assignments include: Portraiture, Figure Drawing, Graphic Design, Still Life and Personal Choices. Testing on Vocabulary.

904 DRAWING II **(SEMESTER .50 CREDIT)**
Students should demonstrate the ability to work independently. Students will continue to improve their skills in sight drawing. Areas covered are pencil, pen and ink, scratch board, charcoal, pastel, and marker as well as printmaking. Assignments will include realism and conceptual work. Areas of assignments include: Portraiture, Figure Drawing, Graphic Design, Still Life and Personal Choices. Testing on Vocabulary.

906 DRAWING III **(SEMESTER .50 CREDIT)**
Students should demonstrate the ability to work independently. This is an advanced level course. Students will continue to improve their skills in sight drawing. Areas covered are pencil, pen and ink, scratch board, charcoal, pastel, and marker as well as printmaking. Assignments will include realism and conceptual work. Areas of assignments include: Portraiture, Figure Drawing, Graphic Design, Still Life and Personal Choices. Testing on Vocabulary.

Prerequisite: Students must complete Drawing II to enroll in this course.

933 TEXTILE ARTS **(SEMESTER .50 CREDIT)**
Students will be introduced to textile types and styles in the arts, in various textile media. While completing projects students will learn methods of weaving. Each project is an independent area of textiles. Vocabulary of textiles will be tested.

911 METAL ARTS I **(SEMESTER .50 CREDIT)**
Students will be introduced to working with metals in the aspects of Jewelry Making. Areas covered are the joining, shaping and finishing of copper-based metals. There will be lessons on the history of metal development. Patience and attention to detail are traits you should possess for success in this class. Testing on Metal History and Tool Vocabulary.

916 METAL ARTS II **(SEMESTER .50 CREDIT)**
Students should demonstrate the ability to work independently. Students will continue working with metals in the aspects of Jewelry Making. Areas covered are the joining, shaping and finishing of copper-based metals. There will be lessons on the history of metal development. Patience and attention to detail are traits you should possess for success in this class. Testing on Metal History and Tool Vocabulary.

917 METAL ARTS III **(SEMESTER .50 CREDIT)**
Students should demonstrate the ability to work independently. This is an advanced level course. Students will continue working with metals in the aspects of Jewelry Making. Areas covered are the joining, shaping and finishing of copper based metals. There will be lessons on the history of metal development. Patience and attention to detail are traits you should possess for success in this class. Testing on Metal History and Tool Vocabulary.
Prerequisite: Students complete Metal Arts II to enroll in this course.

907 MURAL ARTS **(SEMESTER .50 CREDIT)**
Design, Development and production of large-scale paintings within the school to promote a positive school climate, beautification, and for students to leave a legacy of their time and work in school for the years to come. It is beneficial to have had a painting class before Mural Arts but is not required. However, preference will be given to those students with prior experience in painting. Class size limited to 15 students.

912 POTTERY I **(SEMESTER .50 CREDIT)**
Students will be introduced to pottery making. Students will learn methods of construction and finishing of clay to produce projects. Projects begin with functional decorative use and end with sculpture. There will be lessons on the history of pottery development. Testing on Pottery History and Technique / Vocabulary.

913 POTTERY II **(SEMESTER .50 CREDIT)**
Students should demonstrate the ability to work independently. Students will continue to build upon their pottery making skills. Students will utilize methods of construction and finishing of clay to produce projects. Projects begin with functional decorative use and end with sculpture. There will be lessons on the history of pottery development. Testing on Pottery History and Technique / Vocabulary.

926 POTTERY III **(SEMESTER .50 CREDIT)**
Students should demonstrate the ability to work independently. This is an advanced level course. Students will continue to build upon their pottery making skills. Students will utilize methods of construction and finishing of clay to produce projects. Projects begin with functional decorative use and end with sculpture. There will be lessons on the history of pottery development. Testing on Pottery History and Technique / Vocabulary.
Prerequisite: Students must complete Pottery II to enroll in this course.

918 SCULPTURE **(SEMESTER .50 CREDIT)**
Students will be introduced to sculptural types and styles in the arts. Each project is an independent area of three dimensional construction including, additive, subtractive methods. Vocabulary of sculpture will be tested.

BUSINESS DEPARTMENT

Business Ed 1 is comprised of the following courses:

ACC706 ACCOUNTING I (11th and 12th Grade) **(YEAR 1.0 CREDIT)**
Accounting I is a course which is designed to provide students with the knowledge and skills necessary for a solid understanding of accounting principles. When you consider today's entrepreneurial economic climate, this course is extremely useful for anyone who plans on working in business, starting their own business, or who simply wants a good understanding of basic finances. This course introduces accounting for business and personal use, and serves as a good foundation for business opportunities, employment, and post-secondary studies in all areas of business. Topics covered include cash control, payroll, financial statements, the accounting cycle, and fundamentals of bookkeeping. Using the "language of business," students will assemble and analyze, process, and communicate essential information about financial operations. The basic financial statements are presented—balance sheet and income statement. Students are exposed to the recording, summarization, and presentation of financial information and methods of analyzing these statements. Students learn accounting concepts and principles in a logical step-by-step manner. The students will do extensive problem work and a practice set. Significant emphasis is placed on application of both manual and computerized accounting, and CNOWv2's Journal Entry Tool that illustrates the impact of transactions on the accounting equation.
Note: **Accounting can count as 1.0 math credit if needed**

Business Ed 2 is comprised of the following courses:

ACC 707 ADVANCE ACCOUNTING
Advance Accounting offers a comprehensive exploration of financial management, recordkeeping, personal business affairs, and economic activities in the business world. This course is highly recommended for students planning to pursue a major in business or accounting. It also provides valuable skills for those seeking entry-level accounting positions after high school, enhancing their qualifications for the workforce.
Pre-requisite: ACCOUNTING I

ACC722 PERSONAL FINANCE (11th Grade) **(SEMESTER .50 CREDIT)**
Personal Finance is a course which is designed to help students understand the impact of individual choices on occupational goals and future earnings potential. Topics covered will include income, money management, spending and credit, as well as saving and investing. Students will design personal and household budgets, simulate use of checking and savings accounts, demonstrate knowledge of finance, debt, and credit management, and evaluate and understand insurance and taxes. This course will provide a foundational understanding for making informed personal financial decisions. This course will cover a variety of topics including, but not limited to: Savings, investing, credit, debt, financial responsibility, money management, insurance, risk management, income, and careers.
Note: This course is a graduation requirement

ACC251 BUSINESS LAW (9-12 Grades) **(SEMESTER .50 CREDIT)**

Business Law is a course that engages students in legal issues and cases that involve the laws that govern business contracts and the sale of goods and services, property law, consumer law, white collar crimes, equal employment opportunity commission, and federal agencies. Students will find this course relevant to the legal environment in which they live and better understand the legal methods and procedures to starting and running a business. This class implements real case studies and mock trials.

ACC252 BUSINESS SOFTWARE APPLICATIONS/INTERNET APPLICATIONS (SEMESTER .50 CREDIT)
Business Software Applications/Internet Applications is a course which is designed to provide students with the opportunity to study computer terminology, hardware, and software related to the business environment. The course focuses upon the business productivity software applications and professional behavior in computing, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. Within this course students will: identify computer concepts terminology and concepts; basic operating system functionality and terminology; and internet browsers functionality; Apply basic and advanced formatting techniques skills to produce word processing documents, including Letters and Memos, Business Reports, Flyers, Newsletters; Demonstrate basic skills involving spreadsheet functions; create formulas, charts, and graphs; manipulate data; and generate reports; Develop a database, create and format tables, queries, and reports, and enter and modify tables; and Develop and deliver business presentations using presentation software.
Note: This course fulfills the 'Internet' graduation requirement

WELLNESS DEPARTMENT

613 PHYSICAL EDUCATION (9th - 12th grade) (SEMESTER .50 CREDIT)
The goal of gym class is to maintain or improve the human body, mind, and spirit through physical exercises and continue to enjoy participation in physical activity throughout life. This course will encourage psychomotor learning during play or in a movement exploration setting to promote health and wellness! Students will be polled at the onset of the semester, as their interests will help determine which of the units in the curriculum will be taught during the semester. Class participation is required to successfully complete the physical education requirement.
Note: This class is a graduation requirement (.50 credit toward the Wellness credit).

605 HEALTH (10th grade) (SEMESTER .50 CREDIT)
The health course includes instruction in mental health, CPR information, drugs and alcohol, tobacco, sex education, and AIDS. Materials will be continually updated to give the most current information possible to the students. The class includes reading, lectures, films, videos, guest speakers, special projects, and current events dealing with pertinent health issues.
Note: This class is a graduation requirement (.50 credit toward the Wellness credit).

602 ATHLETIC TRAINING/FIRST AID/CPR (SEMESTER .50 CREDIT)
This course will teach students how to provide preventive and emergency care and treatment and rehabilitation of injuries. Students will also learn Infant, Child, Adult First Aid, CPR, and AED.

53 SPORTS NUTRITION (SEMESTER .50 CREDIT)
Your body needs the right balance of carbohydrates, protein, fat, vitamins, minerals and fluids to fuel your fitness. In this course, students will learn how to plan and cook healthy food options that will aid in their overall well-being and enhance their fitness performances. Students will also learn how to calculate caloric consumption vs. expenditure and actively participate in various physical activities.

54 KINESIOLOGY (11th & 12th grade) **(SEMESTER .50 CREDIT)**
Kinesiology is the scientific study of human movement. This course addresses physiological, mechanical, and psychological mechanisms and will be very useful to students interested in the medical field.
Note: *Successful completion of Anatomy preferred, but not required*.

FAMILY AND CONSUMER SCIENCE DEPARTMENT

062 FOODS II **(SEMESTER .50 CREDIT)**
American cooking is a blend of many foreign cuisines. Students will choose a country and research the food customs and eating habits, including a food demonstration of a recipe typical to the country. Studying the food and cuisine of other countries can provide a better understanding of different cultures.

061 FOODS I **(SEMESTER .50 CREDIT)**
Creative cooking is an art. Students in this course will turn ordinary foods into delectable dishes. Emphasis will be placed on creativity and more challenging cooking skills. Students will be given the opportunity to select and prepare hors d'oeuvres, soup, pastries, vegetables, desserts and more.

MUSIC DEPARTMENT

809 SENIOR BAND (9th-12th grade) **(FULL YEAR .5 CREDIT)**
Intermediate to advanced instruction in woodwind, brass, and percussion instruments. Students will continue to develop instrumental technique to advance their level, systematically study a widely varied repertoire, and develop ensemble and solo performance skills. Students will perform in public, and attendance at all extra rehearsals and performances will be required.

808 SENIOR CHORUS (9th-12th grade) **(FULL YEAR .5 CREDIT)**
Students will learn rhythm and pitch exercises based on the understanding that an identification of patterns is one of the most important aspects of reading music. This class will be taught with an emphasis on pitch and interval relationships that are used in singing four-part harmony. Students will be expected to achieve good tone quality. Singing choral literature will develop these techniques. Attendance will be required at all extra rehearsals and concerts.

803 MUSIC THEORY **(SEMESTER .50 CREDIT)**
Students will learn musical composition and practices in today's world. Students will learn basic terminology, scale and interval structure, basic melody and chord structure, and basic harmony. Course goal is to prepare students for college entry music study.

879 MUSIC APPRECIATION **(SEMESTER .50 CREDIT)**
Students will experience a variety of musical styles from around the world piecing together the fabric of our American Musical Heritage. This class will be a lot of listening, reading, watching, student generated project class material and grades based on student work and participation. This class is meant for those in honors classes or with high musical ability and interest or a different version can be offered to students interested in music.

ENGINEERING DEPARTMENT

ENG 100 ENGINEERING THEORY (SEMESTER 0.5 CREDIT)
Engineering Theory is a comprehensive course designed to provide students with a solid foundation in key engineering concepts and practices. This course focuses on four main areas: Engineering Safety, Knowledge of Engineering Fields, Teamwork, and Engineering Ethics. It aims to equip students with the essential skills and knowledge required for a successful career in engineering. Students will gain a thorough understanding of engineering safety protocols and ethical practices, as well as the ability to work effectively in teams. They will also develop a broad knowledge of different engineering fields, preparing them for advanced studies or careers in the engineering industry.

ENG 101 Engineering Graphics (SEMESTER 0.5 CREDIT)
In this course students will learn and apply drafting and engineering skills in 2-D mechanical drawing and Computer Aided Drawing using industry recognized software. Students will gain a great understanding of the use of engineer's and architect's scales, the proper use of graphics equipment and tools, dimensioning, and various types of drawings including multi-view drawings, isometric drawings, and auxiliary views. Students will apply line conventions, prepare orthographic projection drawings, apply principles of dimensioning and annotation, as well as create schematics. Assessments include projects, homework, quizzes, and tests for student evaluation.

ENG153 ELECTRONICS I (10th grade in program) (SEMESTER 0.5 CREDIT)
This course is an introduction to DC and AC circuit theory and analysis. The theory includes electrical measurement systems, Ohm's Law, Kirchoff's Laws, circuit theorems and component characteristics. Laboratory work provides experiences with electrical components, schematics, electrical tools, and basic electrical and electronic instrumentation. Students will be assessed through hands-on projects and labs, written work, and exams.

ENG151 PROGRAMMING I (10th grade in program) (SEMESTER .50 CREDIT)
This course will build on the foundational programming knowledge from Introduction to Programming. Students will develop competency in the programming language Python while learning how to create drawings, functions, mouse events, conditionals, methods, step events, and motion. Assessments will be primarily project based, but will also include written assignments and exams.

ENG 155 Industry and Systems (SEMESTER 0.5 CREDIT)
Industry and Systems is an advanced course designed for high school students enrolled in the Engineering Career and Technical Education (CTE) program. This course provides an in-depth exploration of key industrial and systems engineering concepts, including modeling, machine controls and automated systems, properties of materials, and total quality control. Through hands-on projects and theoretical study, students will gain the skills and knowledge necessary for pursuing careers or further education in engineering and related fields.Upon completion of the Industry and Systems course, students will be equipped with the skills to model engineering systems, design and control automated systems, understand material properties, and implement quality control processes. This foundation prepares them for advanced studies in engineering or entry-level positions in the industrial and systems engineering fields.

ENG120 MANUFACTURING AND INDUSTRY I (10th grade in program) (SEMESTER 0.5 CREDIT)
This course will allow students the opportunity to create larger engineering solutions using the engineering design process. They will be able to describe procedures used in manufacturing, evaluate end products and manufacturing processes, and participate in the product-development process. In addition, they will become

familiar with engineering measurement. Students will be assessed through written exams, classwork, and projects.

ENG154 ELECTRONICS II (12th grade in program) (SEMESTER 0.5 CREDIT)
This course will build on the basic electrical concepts from Electronics I, looking further into the theory of the design and operation of electrical components. Students will construct more in-depth circuits and begin to explore industrial controls. Assessments will be in the form of hands-on projects, written work, and exams.
Prerequisite: Electronics I

ENG600 SUPERVISED ENGINEER. EXPERIENCE (11th grade in program) (SEMESTER 0.5 CREDIT)
Students will be given an opportunity to spend work experience time at an engineering facility. The work opportunity will allow them to experience concepts they have learned in classes first hand. Students will be assessed through a portfolio of gathered artifacts.

TECHNOLOGY EDUCATION DEPARTMENT

ENG10 DRAFTING & ENGINEERING DRAWING I (9th - 12th grade) (SEMESTER .50 CREDIT)
In this course students will learn and apply basic drafting and engineering skills in 2-D mechanical drawing and Computer Aided Drawing using Autodesk Autocad. Students will gain a great understanding of the use of engineer's and architect's scales, the proper use of graphics equipment and tools, dimensioning, and various types of drawings including multi-view drawings, isometric drawings, and auxiliary views. Students will apply line conventions, prepare orthographic projection drawings, apply principles of dimensioning and annotation, as well as create schematics. Assessments include projects, homework, quizzes, and tests for student evaluation.

ENG11 DRAFTING & ENGINEERING DRAWING II (9th - 12th grade) (SEMESTER .50 CREDIT)
In this course students will learn and apply more advanced drafting skills in both 2-D drawings and 3-D solids modeling. Students will work extensively with Autodesk AutoCAD and Inventor software and will gain a great understanding of the working drawings used in industry on both platforms. Students will be able to draw and understand advanced multi-view drawings and assembly drawings. The class includes projects, homework, quizzes, and tests for student evaluations.

ENG17 INTRODUCTION TO ENGINEERING (9th grade) (SEMESTER .50 CREDIT)
If you are considering a career in engineering, this is the course to start with. The course will introduce participants to various aspects of the engineering field including safety, history, problem solving, teamwork, and careers. There will be overviews of engineering topics such as measurement, electronics, programming, manufacturing, and mechanics. Assessments will be primarily project based, but will also include written assignments and exams.

14 HAND TOOLS AND POWER TOOLS I (9th - 12th grade) (SEMESTER .50 CREDIT)
Students will gain the basic principles of measurement, proper safety procedures and equipment, and proper tool use for processing materials. Throughout the course the students will have various small projects, which will expose them to basic tools and machines in the lab. By the end of the course students will be able to safely operate all basic equipment in the lab and have an understanding of their various uses for material processing.

15 HAND TOOLS AND POWER TOOLS II (9th – 12th grade) (SEMESTER .50 CREDIT)
Students will continue to practice the basic principles of measurement, proper safety procedures and equipment, and proper tool use for processing materials. Throughout the course the students will have various small projects, which will expose them to more advanced tools and machines in the lab. By the end of the course students will be able to safely operate all equipment in the lab and have a firm understanding of their various uses for material processing.
Prerequisite: Hand Tools & Power Tools I

1 WOOD TECHNOLOGY I (10th - 12th grade) (SEMESTER .50 CREDIT)
In this course students will be introduced to wood processing and the various woodworking machines utilized in the construction of a Shaker Coffee Table. Students will gain a great understanding of general safety rules and procedures while working with machinery and power tools specific to cabinet making. Students will also learn how to properly finish and clear coat wood projects. The class includes a project, homework, quizzes, and tests for student evaluations.

2 ADVANCED WOOD TECHNOLOGY (11th and 12th grade) (SEMESTER .50 CREDIT)
Students have learned all basic principles of material processing in the first two courses and will use this course as an independent, self-driven educational experience through exploratory learning to create more advanced projects such as tables, chairs cabinets, etc. Projects, work ethic, and participation will be the only grades for this course. The instructor will facilitate learning through providing a healthy educational environment and prompting students through the problem solving /design process that a cabinetmaker would utilize during a project. Students are expected to work independently and meticulously on chosen projects.
Prerequisite: Wood Technology I

WORLD LANGUAGE DEPARTMENT

504 SPANISH I (FULL YEAR 1.0 CREDIT)
Students use a four-skill approach to learning Spanish by practicing listening, speaking, reading, and writing in order to learn basic concepts of the language. Emphasis is placed on vocabulary and elementary grammar with cultural and historical information included throughout the year.

503 SPANISH II (FULL YEAR 1.0 CREDIT)

Students continue a four-skill approach to learning Spanish. Listening, speaking, reading, and writing continue at a voice/intermediate level using a variety of materials. Vocabulary is expanded and grammar concepts are increased. Cultural and historical information is added throughout the year.

502 SPANISH III (FULL YEAR 1.0 CREDIT)

Students improve their abilities to read, write, speak, and understand spoken Spanish at an intermediate level. Increased vocabulary, more advanced grammar concepts and the culture and history of Spanish-speaking countries continue.

501 SPANISH IV (FULL YEAR 1.0 CREDIT)

In this advanced level course, previously learned skills in listening, speaking, reading, and writing are reinforced at an intermediate level. Vocabulary and grammar concepts are reviewed and expanded.

508 FRENCH I (FULL YEAR 1.0 CREDIT)

Students use a four-skill approach to learning French by listening, speaking, reading, and writing in order to learn basic concepts of the language. Emphasis is placed on vocabulary and elementary grammar with cultural and historical information included through the year.

507 FRENCH II (FULL YEAR 1.0 CREDIT)

Students continue a four-skill approach to learning French. Listening, speaking, reading, and writing continue at a novice/intermediate level using a variety of materials. Vocabulary is expanded and grammar concepts are increased. Cultural and historical information is added throughout the year.

506 FRENCH III (FULL YEAR 1.0 CREDIT)

Students improve their abilities to read, write, speak, and understand spoken French at a novice/ intermediate level. Increased vocabulary, more advanced grammar concepts and the culture and history of French-speaking countries continue.

510 FRENCH IV (FULL YEAR 1.0 CREDIT)

In this advanced level course, previously learned skills in listening, speaking, reading, and writing are reinforced at an intermediate level. Vocabulary and grammar concepts are reviewed and expanded.

ALL WORLD LANGUAGE COURSES ARE BASED ON THE STATE AND NATIONAL STANDARDS IN WORLD LANGUAGES.

Enrichment Courses

SUPPLEMENTAL INSTRUCTION **(SEMESTER .50 CREDIT)**

Any (9th-12th grade) student failing to demonstrate proficiency or advanced status on the Keystone Exams (**497** Literature, **498** Algebra I and/or **499** Biology) will be placed in this skill-based supplemental instruction course during Quaker Time. If a student must take more than one subject during supplemental instruction, the student will attend each subject on even or odd days. All students taking the Honors Algebra 1 in 8th grade or Algebra 1 course in 9th grade will be placed in Supplemental Instruction to prepare them for the Algebra Keystone. All students taking Honors Biology/Academic Biology will be placed in Supplemental Instruction to prepare them for the Biology Keystone. Students taking Honors English 10/English 10 will be placed in Supplemental Instruction to prepare them for the Literature Keystone. Upon successful completion of the course, students will receive a total of .50 credit and earn a letter grade.

MILLVILLE VIRTUAL ACADEMY (MVA)

MILLVILLE VIRTUAL ACADEMY (MVA)

The Millville Area School District offers a cyber-learning option for students. Those who select this option through our district receive the following benefits:

- Receive a Millville High School diploma and participate in graduation
- Able to participate in extracurricular activities and school events
- Able to take up to two classes each semester in district

Attendance: MVA attendance is mandatory. Students will accrue absences the same as they would in the building. Truancy issues will be addressed.

Add/Drop Procedure: The first 14 days that a student is enrolled in an MVA course is considered the grace period; beginning the day the student is enrolled and the 13 consecutive days that follow. If the student determines during this time that they no longer want to continue in the course, the student and their parent/guardian must contact Mrs. Marquardt immediately. During the grace period, you may drop the course without penalty. Additional information about the MVA program and procedures can be found in the Millville Virtual Academy Handbook on the school website.

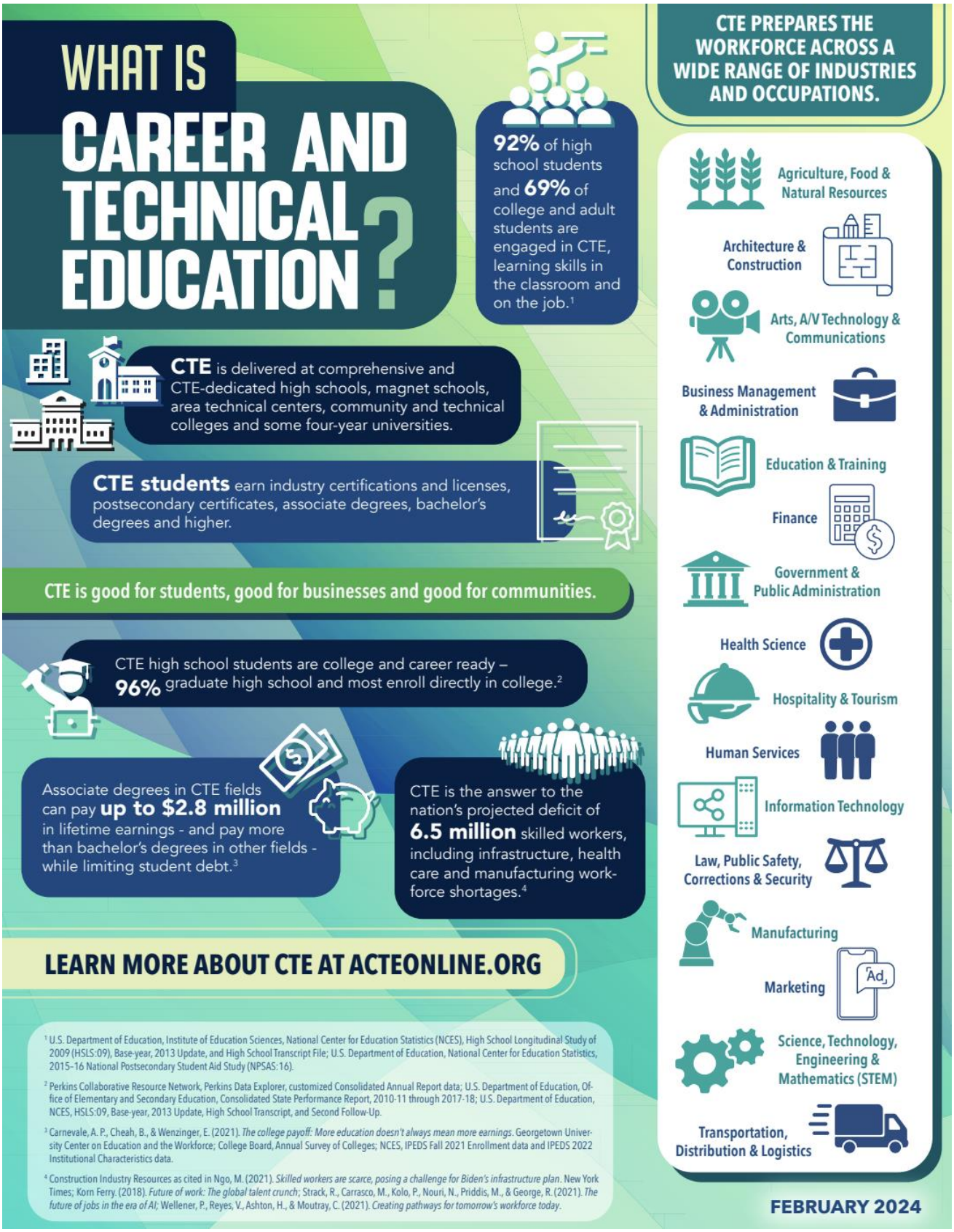
DUAL ENROLLMENT OPPORTUNITIES

POST-SECONDARY COURSES (DUAL ENROLLMENT)

Coursework is available through the Early College Programs at Commonwealth University (Bloomsburg University, Mansfield University and Lock Haven University) for those who are interested in obtaining college credits while meeting high school graduation requirements.

Note: *When choosing this option, consider the Honor Roll information previously noted. All courses must be pre-approved.*

CAREER AND TECHNICAL EDUCATION (CTE) PROGRAMS



AGRICULTURE (01.9999) PROGRAM OVERVIEW

Agricultural Education includes three domains: classroom instruction, premier leadership (through the National FFA Organization), and work-based learning (through Supervised Agricultural Experience projects). Agriculture is the application of mathematics, science, and communication. In Agriculture, you will have the opportunity to participate in hands-on experiments and activities, earn certifications to help you prepare for the workforce, and get first-hand experience with industry professionals. One day you might be starting seeds in the greenhouse, the next you might be analyzing pond water samples, and after that your class may even visit with a large animal veterinarian!

COLLEGE & CAREER

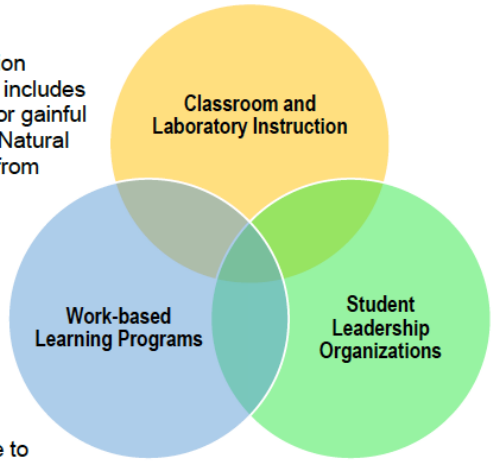
AGRICULTURE, FOOD AND NATURAL RESOURCES

Three Circle Model

Agricultural education prepares students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resources systems. Through agricultural education, students are provided opportunities for leadership development, personal growth and career success. Agricultural education instruction is delivered through three major components:

- Classroom/Laboratory Instruction
- AFNR Work-based Learning
- Student Leadership Organizations

These key components are often visually organized into a three-circle Venn diagram as seen below. The ideal agricultural education program uses all three components together to deliver comprehensive student growth and development. Each component is also described below.



Classroom and Laboratory Instruction
Students work with qualified, experienced agricultural education teachers to receive instruction that is competency-based and includes the development of skills, knowledge and attitudes required for gainful employment in occupations relating to Agriculture, Food and Natural Resources (AFNR). Programs of study may include courses from one or more recognized pathways in AFNR. It is highly recommended that the program be organized to meet the needs of the community, align to student interests, and support the goals of the local school district.

AFNR Work-based Learning
Students work with agricultural education teachers and/or designated supervisors to plan, conduct, record and reflect on a Supervised Agricultural Experience (SAE) program. Experiences develop career and employability skills in alignment with the students' personal goals. SAEs are unique to each student and may be structured as a student business, school-based enterprise, internship, or a research experiment/study. Experiences may be paid or unpaid based on local resources and opportunities.

Student Leadership Organizations
Students work with peers and designated program advisors to plan, conduct and reflect on a comprehensive program of activities designed to promote personal growth and leadership development. Activities may include but are not limited to chapter coordination, state and nationally affiliated conferences and conventions, competitive leadership events, and mentorship programs with designated alumni or supporters. The recognized Career and Technical Student Organization (CTSO) for agricultural education programs in Illinois is the Illinois Association of FFA. FFA chapters are led by a team of student officers and a local FFA Advisor.

The Three-Circle Model
Each of the three components support each other. Knowledge gained in AFNR courses inform SAE program development while skills developed in SAE programs fuel inquiry during coursework. Achievement in classwork and SAE are incentivized through FFA award programs, and relationships built during shared FFA activities make learning together a joyful and lasting experience. All three components continually work in unison to develop the whole student.

Course Progression:

9th Grade	10th Grade	11th Grade	12th Grade
Ag 1	Ag 2	Ag 3	Ag 4
English 9 / English 9 Honors	English 10 / English 10 Honors	English 11 / English 11 Honors / Applied English	English 12 / AP English / Applied English
Algebra 1 / Geometry	Geometry / Algebra II	Pre-Calc/Trig / Applied Math / Algebra II	Pre-Calc/Trig / Applied Math / Accounting I / Prob and Stats
US History II	World Cultures	US Government / AP Euro / AP Government	Co-Op
Business Software & Internet Applications	Biology 10 / Biology Honors	Personal Finance	
Elective (1.5)	PE & Health	Electives (1.5)	Electives (3)
Supervised Agricultural Experience	Supervised Agricultural Experience	Supervised Agricultural Experience	Supervised Agricultural Experience

AG1 (9th in program)

Introduction to Agriculture, Food, and Natural Resources (AFNR) introduces students to the range of agricultural opportunities and the pathways of study they may pursue. This class incorporates science, mathematics, reading, and writing components into the context of agriculture. Students use this course's introductory skills and knowledge throughout the curriculum. Woven throughout the course are activities to develop and improve students' employability skills through practical applications. Students explore career and post-secondary opportunities in each area of the course. While surveying the opportunities available in agriculture and natural resources, students learn to solve problems, research, analyze data, work in teams, and take responsibility for their work, actions, and learning. Students investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community.

AG2 is comprised of the following courses:

AG102 WILDLIFE MANAGEMENT (10th in program) (SEMESTER .50 CREDIT) The goal of this course is to provide students with knowledge of wildlife management and conservation. It is ideal for any student interested in a career in the field of wildlife biology as well as students that enjoy hunting, fishing, trapping, or other outdoor recreation. Topics to be covered include the history of wildlife management, identification of mammals, fish and birds found in Pennsylvania, management techniques for the preservation and control of wildlife populations, and habitat improvement practices will be studied. Students will examine these concepts through the Eels in the Classroom Program. Students enrolled in this course will also receive the opportunity to earn the Ducks Unlimited Ecology Certification.

AG107 NATURAL RESOURCE MANAGEMENT (10th in program) (SEMESTER .50 CREDIT)

This experiment-heavy course is designed to make students more aware of the needs for conservation of our natural resources; water, soil and air. Topics to be covered include soil quality and conservation, water quality and monitoring, air pollution, land pollution, alternative energy and fuels, and sustainable agriculture. Students will examine these concepts through the Eels in the Classroom Program and other hands-on activities.

AG111 BUILDING TRADES (10th in program) (SEMESTER .50 CREDIT)
At some point, you will most likely not be living with your parents and you will need some basic life skills in order to be successful. Considering taking Building Trades also known as "Living on Your Own"! Topics to be taught during this course can be applied to everyday life, not just agriculture. You will learn basic plumbing techniques, residential electrical wiring, safe tractor driving, and concrete masonry. Students enrolled in this course will also receive the opportunity to earn the OSHA-10 Agriculture Certification and/or the National Safe Tractor and Machinery Operation Program (NSTMOP) Certification.

AG 113 SMALL GAS ENGINES (10th in program) (SEMESTER .50 CREDIT)
Do you enjoy working on cars at home or have hobbies like racing dirt bikes or repairing go karts? Maybe you drive to school and just want to learn more about how to care for your vehicle so you don't get ripped off at the mechanic's. Then, Small Gas Engines in the class for you! Students in this class will learn about the major engine systems: fuel system, governor system, compression system, ignition/electrical system, and the cooling & lubrication system as they disassemble and reassemble a small gas engine. Students enrolled in this course will also receive the opportunity to earn the OSHA-10 Agriculture Certification and/or the Briggs and Stratton Master Service Technician Certification.

AG3 is comprised of the following courses:

AG104 HORTICULTURE (11th in program) (YEAR 1.0 CREDIT)
Is your green thumb more brown than green? Let's fix that! Topics to be taught in this class will include plant anatomy, plant development and growth, soils, plant reproduction, plant identification, greenhouse management and insect and disease control. Students may also have the opportunity to learn basic floral design skills so they can create their own corsages, boutonnieres, and bouquets. Students in this class will also play a key role in organizing a spring plant sale. Students enrolled in this course will also receive the opportunity to earn three NOCTI micro-credentials in the areas of plant propagation, soils, and business and retailing.

AG 115 ANIMAL & VETERINARY SCIENCE (11th in program) (YEAR 1.0 CREDIT)
Do you currently raise or hope to someday raise cows, horses, sheep, goats, pigs or chickens? Have you always dreamed of a career working with animals? The primary goal of this course is to expose students to agriculture, animal science, and related career options. Throughout the course, students investigate the consumer perceptions and preferences related to animals in local, regional, and global markets. Students gain knowledge and skills related to animal anatomy, physiology, behavior, nutrition, reproduction, health, selection, and marketing through hands-on activities, projects, and problems. By mimicking work similar to that of animal science specialists, such as industry personnel, livestock producers, veterinarians, and zoologists, students learn to document work, solve problems, and communicate solutions to peers and members of the professional community. Students enrolled in this course will also receive the opportunity to earn the Beef Quality Assurance Certification.
The ASA course includes:

- Background and social issues of animal science
- Handling and caring for animals safely

- Anatomy and physiology
- Nutrition
- Reproduction
- Genetics
- Animal health
- Animal selection, products, and marketing

AG 4 is comprised of the following courses:

AG103 FORESTRY (12th in program) (SEMESTER .50 CREDIT)
This course is designed to make students more aware of the latest concepts in forestry science. Topics to be covered include forest regions, forest management, dendrology, forest products and forest technologies. For portions of this class, students will work outside to identify trees and learn to take tree measurements. Lab experiments in this class will focus on forest products including making paper and maple syrup!

AG112 FOOD SCIENCE AND SAFETY (12th in program) (SEMESTER .50 CREDIT) This course provides learning experiences in food science and safety, which allows students to apply scientific knowledge and processes to the development and preservation of food products. Issues of food science and safety are examined from a scientific and technological perspective. Students critically analyze information to evaluate and draw conclusions on the appropriate use of technology in food science and safety practices. Units of instruction include: principles of food preservation, food processing, biochemistry, food selection, and consumer health. Students develop personal viewpoints on societal issues concerning the development and preservation of food products, and make career plans in the food industry.

AGSAE SUPERVISED AGRICULTURAL EXPERIENCE (all years) (SEMESTER .50 CREDIT) Agriculture Education emphasizes hands-on learning and project-based experiences. One way your Agriculture Education teacher evaluates you in this department is by your Supervised Agriculture Experience (SAE) Project. Your project could be career exploration/shadowing, volunteering at EOS Therapeutic Riding Center, working at Subway, organizing a community garden project, or researching which animal feed is best for sheep…the opportunities are endless! This is an independent study, pass/fail course that is added to your schedule when you are enrolled in an agriculture course for a semester or for the entire year. You will keep records about your project and FFA involvement on a website called the Agriculture Experience Tracker (AET). Your Agriculture Education teacher will facilitate check-ins to ensure you are making progress on your project throughout the year.
Required: When enrolled in any agriculture course.

ENGINEERING (15.9999) PROGRAM OVERVIEW

The purpose of Millville Area School District's engineering program is to provide students the knowledge and experience to pursue a career right out of high school or to continue their education in an engineering field. After three years in the program, students will have completed coursework in engineering graphics, computer programming, electronics, manufacturing and industry, and physics. Opportunities throughout the four years will allow students to participate in

industry-related excursions, industry-recognized guest speakers, and independent design projects. The culmination of the program will be work experience in an engineering field. All engineering courses are open to all students in the Millville Area School District.

Grade 9	Grade 10	Grade 11	Grade 12
Introduction to Engineering	Engineering 1	Engineering 2	Engineering 3
English 9 Choice	English 10 Choice	English 11 Choice	English 12 Choice
Math - Algebra 1B	Math - Geometry	Algebra 2	Math Choice
US History II	World Cultures	US Government	Social Studies Choice
Business Software	Biology Choice	Physics	
	Physical Education		
	Health /PE	Personal Finance	Supervised Engineering Experience

ENG17 INTRODUCTION TO ENGINEERING (9th grade in program) (SEMESTER .50 CREDIT)
If you are considering a career in engineering, this is the course to start with. The course will introduce participants to various aspects of the engineering field including safety, history, problem solving, teamwork, and careers. There will be overviews of engineering topics such as measurement, electronics, programming, manufacturing, and mechanics. Assessments will be primarily project based, but will also include written assignments and exams.

ENGI - would be comprised of the following courses **(2.0 CREDITS)**

ENG 100 ENGINEERING THEORY (10th in program) (SEMESTER 0.5 CREDIT)
Engineering Theory is a comprehensive course designed to provide students with a solid foundation in key engineering concepts and practices. This course focuses on four main areas: Engineering Safety, Knowledge of Engineering Fields, Teamwork, and Engineering Ethics. It aims to equip students with the essential skills and knowledge required for a successful career in engineering. Students will gain a thorough understanding of engineering safety protocols and ethical practices, as well as the ability to work effectively in teams. They will also develop a broad knowledge of different engineering fields, preparing them for advanced studies or careers in the engineering industry.

ENG 101 Engineering Graphics (10th in program) (SEMESTER 0.5 CREDIT)
In this course students will learn and apply drafting and engineering skills in 2-D mechanical drawing and Computer Aided Drawing using industry recognized software. Students will gain a great understanding of the use of engineer's and architect's scales, the proper use of graphics equipment and tools, dimensioning, and

various types of drawings including multi-view drawings, isometric drawings, and auxiliary views. Students will apply line conventions, prepare orthographic projection drawings, apply principles of dimensioning and annotation, as well as create schematics. Assessments include projects, homework, quizzes, and tests for student evaluation.

ENG153 ELECTRONICS I (10th in program) (SEMESTER 0.5 CREDIT)
This course is an introduction to DC and AC circuit theory and analysis. The theory includes electrical measurement systems, Ohm's Law, Kirchoff's Laws, circuit theorems and component characteristics. Laboratory work provides experiences with electrical components, schematics, electrical tools, and basic electrical and electronic instrumentation. Students will be assessed through hands-on projects and labs, written work, and exams.

ENG151 PROGRAMMING I (10th grade in program) (SEMESTER .50 CREDIT)
This course will build on the foundational programming knowledge from Introduction to Programming. Students will develop competency in the programming language Python while learning how to create drawings, functions, mouse events, conditionals, methods, step events, and motion. Assessments will be primarily project based, but will also include written assignments and exams.

ENGII - would be comprised of the following courses (2.0 CREDITS)

ENG 155 MachineControls and Auto System (11th in program) (SEMESTER 0.5 CREDIT)
Industry and Systems is an advanced course designed for high school students enrolled in the Engineering Career and Technical Education (CTE) program. This course provides an in-depth exploration of key industrial and systems engineering concepts, including modeling, machine controls and automated systems, properties of materials, and total quality control. Through hands-on projects and theoretical study, students will gain the skills and knowledge necessary for pursuing careers or further education in engineering and related fields.Upon completion of the Industry and Systems course, students will be equipped with the skills to model engineering systems, design and control automated systems, understand material properties, and implement quality control processes. This foundation prepares them for advanced studies in engineering or entry-level positions in the industrial and systems engineering fields.

ENG120 MANUFACTURING AND INDUSTRY I (11th grade in program) (SEMESTER 0.5 CREDIT)
This course will allow students the opportunity to create larger engineering solutions using the engineering design process. They will be able to describe procedures used in manufacturing, evaluate end products and manufacturing processes, and participate in the product-development process. In addition, they will become familiar with engineering measurement. Students will be assessed through written exams, classwork, and projects.

300 PHYSICS (11th grade in program) (FULL YEAR 1.0 CREDIT)
This science class is for the college-bound, science major student. Physics is the study of matter and energy and the interactions between them. The areas of study will include but are not limited to kinematics, force mechanics, thermodynamics, vibrations and waves, optics, electromagnetism, relativity, and quantum mechanics. An emphasis on technical writing in the APA style will also be present in this course to better help students succeed at the college level. This course is ran as close to a college level course as is manageable. The laboratory work is both qualitative and quantitative.
Prerequisites: Students must successfully complete Algebra II, Geometry and Trigonometry to enroll.

ENG 3 - would be comprised of the following courses **(2.0 CREDITS)**

ENG154 ELECTRONICS II (12th grade in program) **(SEMESTER 0.5 CREDIT)**
This course will build on the basic electrical concepts from Electronics I, looking further into the theory of the design and operation of electrical components. Students will construct more in-depth circuits and begin to explore industrial controls. Assessments will be in the form of hands-on projects, written work, and exams.
Prerequisite: Electronics I

ENG121 MANUFACTURING AND INDUSTRY II (12th grade in program) **(SEMESTER 0.5 CREDIT)**
Building on the foundational manufacturing information from Manufacturing and Industry I, students will explore the components of Total Quality Control, ISO quality standards, flowcharts, and standard operating procedures while further exploring product assembly, material procurement, and transportation and distribution networks. Assessments will include projects, written work, and exams.
Prerequisite: Manufacturing and Industry I

ENG600 SUPERVISED ENGINEER. EXPERIENCE (10,11,12 Grades) **(SEMESTER 0.5 CREDIT)**
Students will be given an opportunity to spend work experience time at an engineering facility. The work opportunity will allow them to experience concepts they have learned in classes first hand. Students will be assessed through a portfolio of gathered artifacts.

ACCOUNTING TECHNOLOGY (52.0302) PROGRAM OVERVIEW

Students in the Accounting pathway learn the fundamentals of maintaining business records, preparing financial statements and managing money. The accounting classes taken will enable them to understand the flow of business, analyze business transactions, recognize and use forms and reposts, and properly record transactions.

BUSINESS ED 1 (11th grade in program) **(YEAR 2.0 CREDIT)**

Business Ed 1 is comprised of the following courses:

ACC706 ACCOUNTING I (11th and 12th Grade-**grade in program**) **(YEAR 1.0 CREDIT)**
Accounting I is a course which is designed to provide students with the knowledge and skills necessary for a solid understanding of accounting principles. When you consider today's entrepreneurial economic climate, this course is extremely useful for anyone who plans on working in business, starting their own business, or who simply wants a good understanding of basic finances. This course introduces accounting for business and personal use, and serves as a good foundation for business opportunities, employment, and post-secondary

studies in all areas of business. Topics covered include cash control, payroll, financial statements, the accounting cycle, and fundamentals of bookkeeping. Using the "language of business," students will assemble and analyze, process, and communicate essential information about financial operations. The basic financial statements are presented—balance sheet and income statement. Students are exposed to the recording, summarization, and presentation of financial information and methods of analyzing these statements. Students learn accounting concepts and principles in a logical step-by-step manner. The students will do extensive problem work and a practice set. Significant emphasis is placed on application of both manual and computerized accounting, and CNOWv2's Journal Entry Tool that illustrates the impact of transactions on the accounting equation.
Note: Accounting can count as 1.0 CORE math credit if needed

ACC252 BUSINESS SOFTWARE /INTERNET APPLICATIONS (11th grade in program)
(SEMESTER .50 CREDIT)
Business Software Applications/Internet Applications is a course which is designed to provide students with the opportunity to study computer terminology, hardware, and software related to the business environment. The course focuses upon the business productivity software applications and professional behavior in computing, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. Within this course, students will: Identify Computer Concepts terminology and concepts; basic operating system functionality and terminology; and internet browsers functionality; Apply basic and advanced formatting techniques skills to produce word processing documents, including Letters and Memos, Business Reports, Flyers, Newsletters; Demonstrate basic skills involving spreadsheet functions; create formulas, charts, and graphs; manipulate data; and generate reports; Develop a database, create and format tables, queries, and reports, and enter and modify tables; and Develop and deliver business presentations using presentation software.
Note: This course fulfills the 'Internet' graduation requirement

BUSINESS ED 2 (12th grade in program) (YEAR 2.0 CREDIT)

Business Ed 2 is comprised of the following courses:

ADVANCE ACCOUNTING (12th grade in program)

Advance Accounting offers a comprehensive exploration of financial management, recordkeeping, personal business affairs, and economic activities in the business world. This course is highly recommended for students planning to pursue a major in business or accounting. It also provides valuable skills for those seeking entry-level accounting positions after high school, enhancing their qualifications for the workforce.Pre-requisite: ACCOUNTING I

ACC251 BUSINESS LAW (12th grade in program) **(SEMESTER .50 CREDIT)**
Business Law is a course that engages students in legal issues and cases that involve the laws that govern business contracts and the sale of goods and services, property law, consumer law, white collar crimes, equal

employment opportunity commission, and federal agencies. Students will find this course relevant to the legal environment in which they live and better understand the legal methods and procedures to starting and running a business. This class implements real case studies and mock trials.

ACC253 <u>ECONOMICS</u> (12th grade in program) (SEMESTER .50 CREDIT)
This course will give the students a greater understanding of economics ranging from the viewpoint of the individual consumer or small business owner to the global economy. The course will study the law of supply and demand, the free enterprise system, the relationship between government and business, factors affecting business profit, and the concept of productivity.