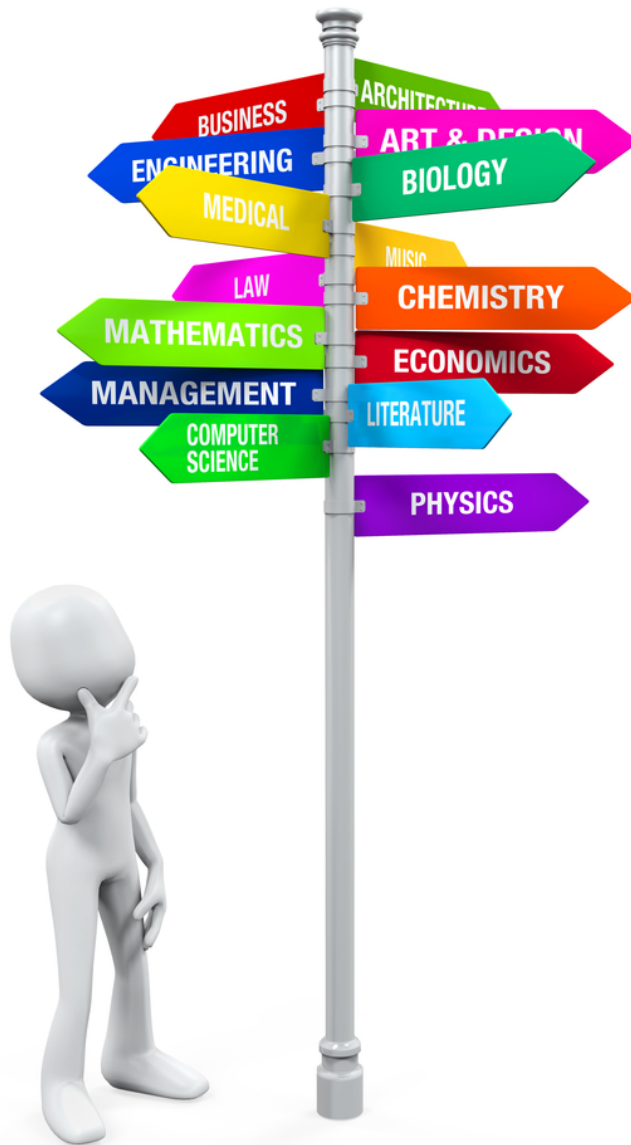


Frazier High School



Program of Studies

2022-2023

Table of Contents

Introduction	2
• Scheduling Process	2
• Mission Statement	2
• Vision Statement	2
General Information	
• Graduation Requirements	3
• Class Standing	4
• Advanced Placement and Honors Courses	4
• College in the High School	4
• Schedule Change Policy	4
• Work Release Program	5
• Student Athletes: NCAA Eligibility	6
Career Pathway Options	
• Careers	7
• Course Selection Template	8
• Engineering	9
• Science	10
• College Preparatory	11
• Career Preparatory	12
• Career and Technology	13
Course Descriptions	
• Math	14
• Science and Technology	18
• Language Arts	25
• Social Studies	30
• Modern Languages	34
• Arts	37
• Family and Consumer Sciences	39
• Additional Courses	40
• Learning Support	43
• Career and Technology Center	44

INTRODUCTION

Planning a high school schedule takes a great deal of thought and preparation. Students and parents must consider career choices, college requirements, graduation requirements, student interests and ability level when planning a schedule. Students, in consultation with their parents, school counselors and teachers, should plan a tentative four-year program. (A course distribution list and a course selection sheet appear on the page). This plan should meet individual needs. Choices about courses for the following years should focus on the student's interests, abilities, and plans for the future. As you select your courses, pay special attention to course requirements, prerequisites and course sequence.

Scheduling Process

The school counselor will meet with all 9th, 10th, and 11th grade students to schedule for the following school year. During homeroom, the students will receive distribution of current transcripts, a review of graduation requirements, and specific grade level requirements will be discussed followed by entering course requests into the system. All 11th grade students will meet individually with the counselor to discuss graduation requirements.

Mission Statement

The mission of the Frazier School District is to inspire and empower our students so that they can become lifelong learners who are respectful, responsible and productive citizens in a global society.

Vision Statement

The Frazier School District is committed to providing students with an academically rigorous curriculum while developing deeper learning competencies in all students. Frazier sets high expectations in support of students' efforts to strive to achieve academically and in the acquisition of the skills necessary for life success.

GENERAL INFORMATION

Graduation Requirements

Students must meet the following requirements in order to graduate from Frazier High School:

1. Complete a graduation project in one or more areas of concentrated study during their senior year.
2. Earn a minimum of thirty (30) units of study, nineteen (19) of which must be earned from the Planned Instructional Chart listed below:

English	4 units
Mathematics	4 units
Science and Tech	4 units
Social Studies	3 units
Arts/Humanities	2.5 units
Wellness	.5 unit
Freshman Seminar	1 unit

- Students who are not eligible to receive a diploma at the time of commencement will not be permitted to participate in the commencement program.
- Students will not receive a diploma at the time of commencement if they did not clear all hold slips.

State Graduation Requirements

Students can meet the statewide graduation requirement by:

- Scoring proficient or advanced on each Keystone Exam - Algebra I, Literature, and Biology.
- Earning a satisfactory composite score of 4452 on the Algebra I, Literature, and Biology Keystone Exams. You must score proficient or advanced on at least one Keystone exam.
- Earning a passing grade on the courses associated with each Keystone Exam, and satisfactorily complete one of the following: an alternative assessment (SAT, PSAT, ACT, ASVAB, Gold Level ACT WorkKeys), advanced coursework (AP, IB, concurrent enrollment courses), pre-apprenticeship, or acceptance in a 4-year nonprofit institution of higher education for college-level coursework.
- Earning a passing grade on the courses associated with each Keystone Exam, and pass the National Occupational Competency Testing Institute (NOCTI) or the National Institute of Metalworking Skills (NIMS) assessment in an approved Career and Technical Education concentration.
- Earning a passing grade on the courses associated with each Keystone Exam, and demonstrate readiness for postsecondary engagement through three pieces of evidence from the student’s career portfolio aligned to student goals and career plan. Examples of evidence will include ACT WorkKeys, SAT Subject tests, AP, IB and concurrent coursework, higher education acceptance, community learning project, completion of an internship, externship or co-op or full-time employment.

Class Rank

Class rank will be calculated based upon the unit value of each course and the weighted grade received in that course. Class rank will be posted at the end of each academic year. Only classes scheduled for students in grades 9-12, will appear on transcripts and calculated in GPA and Class Rank.

Class Standing

The minimum number of credits necessary for advancement is listed below, although the principal may use discretionary powers in unusual circumstances to waive the standards:

Advancement to: Grade 10 - 6 credits
 Grade 11 - 14 credits
 Grade 12 - 22 credits

Advanced Placement and Honors Courses

Courses with an Honors or Advanced Placement designation will be given extra “weight” for Honor Roll and RANK calculations ONLY.

All honors courses count as a level 2 weighted course and all advanced placement courses count as a level 3 weighted course for the purposes of honor roll and class rank only.

The Advanced Placement exam will be optional for all students taking an Advanced Placement course. The cost of the advanced placement examination(s) will be covered by the student and then if a score of “3” or higher is obtained the district will reimburse the students.

AP	Honors	Honors
AP American Government	Honors English 9, 10, 11	Honors Biology
AP Calculus	Honors Chemistry	Introduction to Engineering Design (PLTW)
AP Chemistry	Advanced Chemistry	Principles of Engineering (PLTW)
AP English 12	Pre-Calculus	Civil Engineering and Architecture (PLTW)
AP European History	Statistics	Aerospace Engineering (PLTW)AP
AP U.S. History	Human Biology	Principles of Biomedical Science
AP Physics I	Anatomy & Physiology	Engineering Design & Development(PLTW)
	Computerized Accounting	Spanish III & IV, French III & IV
	BOTS	

College in the High School

Frazier High School has an agreement with both St. Francis University and Mt. Aloysius College to offer college credit for AP courses taken in high school. Credits earned through this program transfer to many colleges and universities. The courses that are approved as dual enrollment classes are AP American Government, AP English 12, AP European History, AP Physics I, and AP U.S. History. Information on this program can be obtained in the guidance office.

Schedule Change Policy

Important notice to Students and Parents: Be absolutely certain of your course selections. There will be no student or parent initiated schedule changes after the first 3 days of the semester. Dropping a course after the 3-day period may result in a Withdraw Pass (WP) or a Withdraw Fail (WF) on your transcript. If any changes need to be made after this 3-day period they MUST be approved in writing by the original teacher, new teacher, school counselor, principal, and parent.

In selecting your courses for next year, you should consider the following:

- (1) graduation requirements of Frazier High School
- (2) the courses that will meet future educational and/or vocational needs,
- (3) your ability and aptitude to meet the class requirements.

In order to achieve this, you, the student, must plan and understand yourself, your capabilities, your interests and limitations. You should plan ahead and discuss your course selections with parents/guardians, counselors and teachers. If you wish to talk to the school counselor you may make an appointment. Parents/guardians wishing to discuss your selections can call 724-736-9507 to schedule an appointment with the school counselor. **Students are reminded that it is their responsibility to ensure that all graduation requirements are met.**

Requests for schedule changes will be difficult if not impossible to accommodate after the last week of school. Schedule changes requested after the last day of school will be limited to the following categories:

1. Failure of a required subject that must be repeated
2. Successful completion of a summer school course
3. Schedule conflicts occur or errors are made by the school during the scheduling process
4. Students register for a class with prerequisites during the scheduling process and then perform poorly during the remainder of the school year.

Work Release Program

Frazier School District recognizes that as students reach their senior year there sometimes exist a need to be released from school on a daily basis for reasons of employment and/ or family illness. This Work Release Program is designed to meet that need while ensuring that the student fulfills all of the requirements needed to graduate from Frazier High School

Requirements

1. The applicant must be a 2nd semester graduating senior.
2. The applicant must have a class schedule that will fulfill all requirements for graduation.
3. If under age, the applicant must possess a valid Employment Certificate.

To continue in the Work Release Program, the student must submit an Employer Verification Form that shows the hours worked and that employment is continued to the school guidance counselor at the end of each month. The form will reveal the days and hours that the student has worked and contain a description of his/her job duties and other accomplishments related to the position. A minimum of six (6) hours per week must be worked during the school day.

Participation in the work release will be terminated when the student's job is terminated. Work release will also be terminated when the student accumulates more than three (3) unexcused absences or more than five (5) unexcused cases of tardiness to school. Work release will also be terminated if the student's grade point average falls below 1.75 or if the student receives an "F" in any of his/her classes during any grading period.

The Work Release Program may be applied to situations involving long-term family illness. If a student is to be released for a reason of long-term family illness, the student must present proof that he/she is needed at home. This proof will be in the form of a letter from the student's family doctor. The letter will describe the need for the student's early release and will list the days and hours that he/she will be needed at home. The student must also present a letter from his/her parents verifying the need for the student to be at home and granting permission to be released at a designated time. This requirement for parental verification will be waived if the applicant is eighteen years of age or older and no longer lives with his/her parents. This requirement will also be waived if the applicant has been declared an emancipated youth as provided by law.

STUDENT ATHLETES: NCAA ELIGIBILITY STANDARDS

Students planning to attend an NCAA Division I or II institution are required to complete 16 core courses. Beginning August 1, 2016, NCAA Division I will require 10 core courses to be completed prior to the seventh semester (7 of the 10 must be a combination of English, math, or natural or physical science that meet the distribution requirements as outlined by the NCAA below). Only NCAA approved core courses are used in the calculation of the GPA for NCAA purposes. Be sure to look at your high school’s list of NCAA approved core courses at www.eligibilitycenter.org to make certain that the courses being taken have been approved as core courses.*

*Courses considered elective in nature are generally NOT approved core courses for NCAA eligibility standards. For example, ALL courses in the Art Department, Family & Consumer Science Department, Music Department, and Technology Education Department are NOT approved. However, ALL World Languages ARE approved core courses in addition to some electives like Anatomy I and II and those in the Science and Social Studies areas. There are some exceptions though, and you must consult your counselor and utilize the approved core course list for Frazier High School from the eligibility center website indicated above. Sometimes General courses are not acceptable. Emphasis is on College Preparatory Coursework.

For more information regarding the rules, visit the eligibility center website identified above and consult your school counselor prior to scheduling your courses.

<u>DIVISION I</u>	<u>DIVISION II</u>
<u>16 CORE COURSES</u>	<u>16 CORE COURSES</u>
<ul style="list-style-type: none"> · 4 years of English · 3 years of Math (Algebra I or higher) · 2 years of Natural / Physical Science (1 year of lab if offered by high school) · 1 year of additional English, Math, or Natural / Physical Science · 2 years of Social Science · 4 years of additional courses (from any area above, including Foreign Language) 	<ul style="list-style-type: none"> · 3 years of English · 2 years of Math (Algebra I or higher) · 2 years of Natural / Physical Science (1 year of lab if offered by high school) · 3 years of additional English, Math, or Natural / Physical Science · 2 years of Social Science · 4 years of additional courses (from any area above, including Foreign Language)

CAREER PATHWAY OPTIONS

There are four pathways that students can follow throughout their four years at Frazier High School to prepare them for life after high school. These specific pathways and their purpose and goals are presented below.

Students will be assisted in the development of a program of study based on their interests and abilities, but they will be expected to assume responsibility for meeting the minimum requirements.

❖ **Engineering Pathway**

This pathway will provide students with a strong academic base focusing on advanced levels of Science, Technology, Engineering, and Math. This pathway is challenging and is appropriate for students who plan to attend a college or university, especially those intending on majoring in math, science, or engineering related fields. It also prepares for direct entry to college and should be followed by students with high academic ability and interest.

❖ **Science Pathway**

This pathway will provide students with a strong academic base focusing on advanced levels of English, Math and Science. This pathway is challenging and is appropriate for students who plan to attend a college or university, especially those intending on majoring in a medical or science related field. It also prepares for direct entry to college and should be followed by students with high academic ability and interest.

❖ **College Preparatory Pathway**

The College Preparatory Pathway is intended to prepare students for entrance into 4-year and 2-year colleges, trade schools, and certificate programs. This is a pathway that prepares for direct entry to college and should be followed by students with high academic ability and interest. Students are free to explore a wide range of elective courses to meet their varied and specialized interests. Students in this pathway will be prepared for admission to institutions of higher learning by proper selection of academic and elective subjects and also by maintaining a high scholastic rating.

❖ **Career Preparatory Pathway**

The Career Preparatory Pathway is intended to prepare students for entrance into career exploration after graduation. This is a pathway that prepares for entry into career exploration and should be followed by students with academic ability and interest in career exploration. Students are free to explore a wide range of elective courses to meet their varied and specialized interests. Students in this pathway will be prepared for admission into career options by proper selection of academic and elective subjects and also by maintaining a scholastic rating.

❖ **Career and Technology Center Pathway**

The Career and Technology Center Pathway is intended to prepare students for careers and/or post secondary education in a trade or technical school. It is intended for those students who want to approach the job market with not just interest but also skills. Frazier High School is a participating member of the Central Westmoreland Career and Technology Center. Students must complete an application (available in the Counseling Office) to attend the CTC.

Course Selection Template

Students must choose 8 total credits per year. (regardless of possible work/college release)

R = Required

* Designates Honors (Level 2)

** Designates AP (Level 3)

Course Area	Grade 9	Grade 10	Grade 11	Grade 12
English 4 credits	4000 English 9(1) or 4001 H English 9*(1)	4100 English 10(1) or 4101 H English 10*(1)	4200 English 11(1) or 4201 H English 11*(1)	4300 English 12(1) or 4301 AP English**(1)
Mathematics 4 credits	4003 Algebra I ^R (1)	4102 Geometry ^R (1) 4202 Algebra II(1)	4202 Algebra II ^R (1) 4203 Trigonometry*(1) 4202 Pre-Calculus*(1) 4302 Statistics*(1) 4216 Financial Algebra(1) 4414 Computerized Accounting(1) 4429 Digital Applied Skills(1)	4203 Trigonometry*(1) 4202 Pre-Calculus*(1) 4302 Statistics*(1) 4216 Financial Algebra(1) 4414 Computerized Accounting(1) 4303 AP Calculus**(2) 4429 Digital Applied Skills(1)
Science 4 credits	4103 Biology(1) 4104 H Biology*(1)	4011 Intro to Engineer Design*(1) 4227 Human Biology* (1) 4205 Applied Chem (1) 4206 Chemistry ^(10 or 11) (1) 4207 H Chemistry ^{*(10 or 11)} (1) 4225 Environmental Sci. (1)	4206 Chemistry ^{R(10 or 11)} (1) 4207 H Chemistry ^{*(10 or 11)} (1) 4205 Applied Chemical Science(1) 4107 Communication Technology(1) 4110 Principles of Engineering*(1) 4305 BOTS*(1) 4417 Anatomy*(1) 4317 Life Science (1) 4412 Intro to GIS(1) 4304 Physics*(1) 4445 Civil Engineering & Architecture*(1) 4405 AP Physics I**(2) 4115 Principles of Biomed. Sci.*(2) 4447 Computer Essential Skills (1)	4110 Principles of Engineering*(1) 4305 BOTS*(1) 4417 Anatomy*(1) 4412 Intro to GIS(1) 4304 Physics(1) 4445 Civil Engineering & Architecture*(1) 4405 AP Physics I**(2) 4307 Advanced Chemistry*(1) 4403 AP Chemistry**(1) 4447 Computer Essential Skills (1)
Social Studies 3 credits	4005 American Government ^R (1)	4105 Contemporary American Studies ^R (1)	4208 The Modern World(1) 4209 Personal Finance(1) 4410 Sociology(1) 4411 Psychology(1) 4412 Global Issues(1) 4400 AP American Government**(1) 4401 AP US History**(1) 4402 AP European History**(1) 4426 Economics (1) 4413 Humanities(1)	4208 The Modern World(1) 4209 Personal Finance(1) 4410 Sociology(1) 4411 Psychology(1) 4412 Global Issues(1) 4400 AP American Government**(1) 4401 AP US History**(1) 4402 AP European History**(1) 4426 Economics (1) 4413 Humanities(1)
Wellness .5 credit	4022 Wellness	4211 Physical Education (1)	4211 Physical Education (1) 4210 Personal Fitness (1)	4211 Physical Education (1) 4210 Personal Fitness (1)
Arts & Humanities 2 credits	Spanish I (1) or French I (1)	Spanish II or French II (None required if attending 3 years at CTC)	Spanish III or French III Human Development Theory Nutrition & Foods Creative Writing I & II	Spanish IV or French IV Art / Art & Design Music Technology Human Development Theory Human Development Lab Nutrition & Foods Creative Writing I & II Communication Studies
Electives 9+ credits	Freshman Seminar FCS, Tech Ed 9, Music App	Career Exploration Current Events	Any course that is not considered "Required" (R)	Any course that is not considered "Required" (R)
CTC	9th graders do not attend the CTC.	AM CTC (4)	AM CTC (4) PM CTC (4)	AM CTC (4) PM CTC (4)

Engineering Pathway

Grade 9	Credit
Freshman Seminar	1
Honors English 9*	1
Algebra 1 ^{KE}	1
American Government	1
Honors Biology ^{KE*}	1
9th Grade Rotation (FCS, Tech Ed, Wellness, Music Appreciation)	2
World Language (Spanish I or French I)	1
	8 Total

Grade 10	Credit
Honors English 10 ^{KE*}	1
Geometry	1
Introduction to Engineer Design*	1
Contemporary American Studies	1
Principles of Engineering*	1
Algebra II	1
Honors Chemistry*	1
World Language (Spanish II or French II)	1
	8 Total

Grade 11	Credit
Honors English 11*	1
Trigonometry	1
AP Physics I**	2
Aerospace Engineering*	1
Civil Engineering and Architecture*	1
Pre-Calculus*	1
Elective	1
	8 Total

Grade 12	Credit
AP English 12**	1
AP Calculus**	2
Advanced Chemistry*	1
AP Chemistry**	1
Engineering Design & Development	1
Electives	2
	8 Total

* - Honors Course (Level 2 weighting)

** - AP Course (Level 3 weighting)

^{KE} - Keystone Exam

Science Pathway

Grade 9	Credit
Freshman Seminar	1
Honors English 9*	1
Algebra 1 ^{KE}	1
American Government	1
Honors Biology ^{KE*}	1
9th Grade Rotation (FCS, Tech Ed, Wellness, Music Appreciation)	2
World Language (Spanish I or French I)	1
	8 Total

Grade 10	Credit
Honors English 10 ^{KE*}	1
Geometry	1
Human Biology*	1
Contemporary American Studies	1
Principles of Biomedical Science*	1
Algebra II	1
Honors Chemistry*	1
World Language (Spanish II or French II)	1
	8 Total

Grade 11	Credit
Honors English 11*	1
Trigonometry	1
AP Physics I**	2
Anatomy*	1
Pre-Calculus*	1
Science Elective	1
Elective	1
	8 Total

Grade 12	Credit
AP English 12**	1
AP Calculus**	2
Advanced Chemistry*	1
AP Chemistry**	1
Nutrition & Wellness	1
Electives	2
	8 Total

* - Honors Course (Level 2 weighting)

** - AP Course (Level 3 weighting)

^{KE} - Keystone Exam

College Prep Pathway

Grade 9	Credit
Freshman Seminar	1
English 9 or Honors English 9*	1
Algebra 1 ^{KE}	1
American Government	1
Biology ^{KE} or Honors Biology ^{KE*}	1
9th Grade Rotation (FCS, Tech Ed, Wellness, Music Appreciation)	2
World Language (Spanish I or French I)	1
	8 Total

Grade 10	Credits
English 10 ^{KE} or Honors English 10 ^{KE*}	1
Geometry	1
Chemistry or Honors Chemistry*	1
Contemporary American Studies	1
Career Explorations	1
Introduction to Engineering Design*	1
Current Events	1
World Language (Spanish II or French II)	1
	8 Total

Grade 11	Credit
English 11 or Honors English 11*	1
Algebra II	1
Physics	1
Modern World	1
World Language (Spanish III* or French III*)	1
Elective	3
	8 Total

Grade 12	Credit
English 12 or AP English 12**	1
Trigonometry or Statistics or Pre-Calculus*	1
World Language (Spanish IV* or French IV*)	1
Nutrition and Wellness or Human Development	1
Electives	4
	8 Total

* - Honors Course (Level 2 weighting)

** - AP Course (Level 3 weighting)

^{KE} - Keystone Exam

Career Prep Pathway

Grade 9	Credit
Freshman Seminar	1
English 9	1
Algebra 1 ^{KE}	1
American Government	1
Biology ^{KE}	1
9th Grade Rotation (FCS, Tech Ed, Wellness, Music Appreciation)	2
World Language (Spanish I or French I)	1
	8 Total

Grade 10	Credits
English 10 ^{KE}	1
Geometry	1
Chemistry or Applied Chemistry	1
Contemporary American Studies	1
Career Explorations	1
Introduction to Engineering Design	1
Current Events	1
World Language (Spanish II or French II)	1
	8 Total

Grade 11	Credit
English 11	1
Algebra II	1
Personal Finance	1
Modern World	1
Elective	4
	8 Total

Grade 12	Credit
English 12	1
Financial Algebra	1
Physics	1
Physical Education	1
Electives	4
	8 Total

* - Honors Course (Level 2 weighting)

** - AP Course (Level 3 weighting)

^{KE} - Keystone Exam

Career and Technology Center Pathway

Grade 9	Credits
Freshman Seminar	1
English 9	1
Algebra 1 ^{KE}	1
American Government	1
Biology ^{KE}	1
9th Grade Rotation (FCS, Tech Ed, Wellness, Music Appreciation)	2
World Language (Spanish I or French I)	1
	8 Total

Grade 10	Credits
English 10 ^{KE}	1
Geometry	1
Environmental Science	1
Contemporary American Studies	1
Program of Choice @ CWCTC	4
	8 Total

Grade 11	Credits
English 11	1
Algebra II	1
The Modern World	1
Applied Chemistry	1
Program of Choice @ CWCTC	4
	8 Total

Grade 12	Credits
English 12	1
Math Elective	1
Science Elective	1
Elective	1
Program of Choice @ CWCTC	4
	8 Total

MATHEMATICS

Algebra I A
Algebra I B
Algebra I (Keystone Exam Course)
Geometry
Algebra II
Financial Algebra
Trigonometry
Pre-Calculus*
Statistics*
AP Calculus**
Computerized Accounting*
Digital Applied Skills

ALGEBRA I A (4030)**1 Credit**

The first course of beginning algebra skills include expressions, equations, integers, powers and exponents, polynomials, factoring, ratios, proportions, percents, inequalities, and an introduction to the coordinate plane. Also, PA State Standards in Algebra and Keystone applications are stressed.

ALGEBRA I A (4034)**1 Credit**

This first track course of Algebra 1, focuses on operations and linear equations & inequalities. Topics include real numbers & expressions, exponents, polynomials, factoring, linear equations & inequalities and systems of linear equations & inequalities. Upon completion of this course, students will take the Keystone Exam Module 1.

ALGEBRA I B (4031)**1 Credit**

The course is a continuation of algebra skills that emphasizes more advanced concepts such as linear functions and polynomials. This course consists of topics, such as relations and functions, graphing functions, scatter plots and trend lines, arithmetic sequence, finding intercepts, rate of change and slope, slope-intercept form, point-slope form, slopes of parallel and perpendicular lines, exponents, polynomials, and factoring.

ALGEBRA IB (4035)**1 Credit**

The second track course of Algebra 1, focuses on linear functions and data organization. Topics include functions, coordinate geometry, statistics, lines of best fit and probability. Upon completion of this course, students will take the Keystone Exam Module 2.

ALGEBRA I (Keystone Exam Course)**1 Credit**

This course is a study of the language, concepts, and techniques of Algebra that will prepare students to approach and solve problems following a logical succession of steps. Skills taught in this course lay groundwork for upper level math and science courses and have practical uses. The key units studied in alignment with state assessment anchors include: Equations, Inequalities, Relations and Functions, Linear Functions, Systems of Equations and Inequalities, Exponents and Polynomials, Factoring Polynomials, Rational Expressions, and Probability and Statistics. Students are expected to be highly motivated in striving towards proficiency by way of a strong work ethic.

GEOMETRY**1 Credit**

This Geometry course includes an in-depth analysis of plane, solid, and coordinate geometry as they relate to both abstract mathematical concepts as well as real-world problem situations. Topics include foundations for geometric reasoning, parallel and perpendicular lines, perimeter and area analysis, volume and surface area analysis, properties and attributes of polygons, similarity and congruence, and properties and attributes of circles. Emphasis will be placed on critical thinking skills as they relate to logical reasoning and argument. Students will be required to use a graphic calculator and other technological tools to discover and explain much of the course content.

Prerequisite: Algebra 1

ALGEBRA II**1 Credit**

Students extend their repertoire of mathematics learned in Algebra I. They will study Foundations for Functions, Linear Functions, Linear Systems, Quadratic Functions, Polynomial Functions, Exponential and Logarithmic Functions, Rational and Radical Functions. This course will prepare students for high-stakes tests such as SATs and for more advanced mathematics and science courses in high school.

Prerequisite: Algebra 1

FINANCIAL ALGEBRA**1 Credit**

Students will practice algebra and geometric mathematics using financial business applications. Specific areas that will be covered include the decision making process, financial aspects of career planning, financial management, income analysis, budgeting techniques, savings and investment strategies in order to meet short and long term goals, evaluation of services offered by financial institutions, managing credit cards and debt.

Prerequisite: Geometry

TRIGONOMETRY**1 Credit**

Trigonometry is a course that provides students with insight into mathematical ideas involving trigonometry by making connections to both algebra and geometry. This course begins by reviewing basic concepts needed for trigonometry. As students continue with the course, they will learn: The Six Trigonometric Functions, Right Triangle Trigonometry, Radian Measure, Graphing and Inverse Functions, Identities and Formulas, Equations & Triangles. Throughout the course, students will discover examples of the role of

mathematics in daily life. This course will prepare students for more advanced mathematics courses in high school, such as Pre-Calculus and AP Calculus.

Prerequisites: 70% or higher in Algebra II.

PRE-CALCULUS*

1 Credit

This course is intended to provide the mathematical background needed for Calculus. The concepts that play a central role in calculus are explored algebraically, graphically, and numerically. Students are expected to participate actively in the development of these concepts without the use of a calculator. A calculator will only be used in this course when appropriate.

This course will include: Fundamentals, Functions, Polynomial and Rational Functions, Exponential and Logarithmic Functions, Systems of Equations and Inequalities, Limits, and a Review of Trigonometry.

Prerequisite: 80% or higher in Trigonometry.

STATISTICS*

1 Credit

Statistics is a course that offers an effective approach to learning the essentials of statistical analysis. It is designed to help students' link statistics and real-world applications. Students use statistical methods to interpret data while focusing on the interpretation and communication of information. This course presents the fundamental concepts of data analysis required to prepare students for advanced topics like acceptance sampling, statistical process control, reliability, and design of experiments. Key concepts include: organizing data; averages and variation; correlation and regression; elementary probability theory; normal curves and sampling distributions; estimation; hypothesis testing; inferences about differences.

Prerequisite: Algebra II

AP CALCULUS**

2 Credits

The primary objectives of this course are to enable students to prove geometric proofs analytically, to develop, through rigorous problem-solving, the ability to find limits of functions and determine continuity of function and find derivatives of functions, to develop graphing techniques using asymptotes, max and min values of functions, including the first and second derivative tests, and to be introduced to integral calculus. The graphing calculator will be used to complete many of these tasks. The major units to be covered are real numbers, functions and graphs, analytical geometry, limits and continuity, differentiation, and integration. This course is designed to prepare students for the A.P. Calculus examination.

Prerequisite: at least an 85 % in Pre-Calculus.

COMPUTERIZED ACCOUNTING

1 Credit

The primary objectives of this course are to enable students to learn basic knowledge and skills needed for careers in accounting and related business fields, and to learn basic knowledge and skills to serve as a foundation on which to continue the study of accounting at the college level.

The major units to be covered are accounting for a service business, partnership accounting for a merchandising business, and corporate accounting for a merchandising business.

This course includes a hands-on approach using the computer. It presents and integrates automated accounting principles, and provides a hands-on approach for learning how automated accounting systems

function. Computer Accounting consists of four major accounting systems commonly found in computerized accounting environments: the general ledger, accounts payable, accounts receivable, and payroll. Students are able to work independently at their own rates.

APPLIED DIGITAL SKILLS

1 Credit

Google Applied Digital Skills is a semester digital literacy course. The video tutorial-style, web-based curriculum is designed for students to complete independently, though they're encouraged to seek peer feedback as they progress. However, all of the lessons may be accomplished in pairs or small groups. The curriculum may require some work to be completed in a flipped classroom where students complete the independent activities at home and use class time for brainstorming, editing, and presenting.

SCIENCE and TECHNOLOGY

Biology (Keystone Exam Course)
 Honors Biology* (Keystone Exam Course)
 Human Biology*
 Life Science
 Introduction to Engineering Design (PLTW)*
 Applied Chemical Science
 Chemistry
 Honors Chemistry*
 Advanced Chemistry*
 Anatomy & Physiology*
 AP Chemistry**
 Physics
 Principles of Engineering (PLTW)*
 Graphic Communication
 BOTS
 Engineering Design and Development (PLTW)*
 AP Physics 1 – Algebra Based**
 Introduction to GIS
 Civil Engineering and Architecture (PLTW)*
 Aerospace Engineering (PLTW)*
 Environmental Science
 Principles of Biomedical Science (PLTW)*
 Computer Essential Skills (PLTW)

*Advanced Course

**AP Course

BIOLOGY (Keystone Exam Course)**1 Credit**

The course will cover basic chemistry, cellular biology, genetics, evolution, ecology. The curriculum integrates writing skills, critical-thinking skills, and laboratory skills as they apply to the standards. In addition, the coursework will emphasize microscopy, calculating data, graphing and essay exam questions. The course is designed to offer the student a detailed background in biological topics such as cell structure and physiology, genetics, molecular biology, classification of organisms and the continuity of life.

HONORS BIOLOGY* (Keystone Exam Course)**1 Credit**

This course is designed for those students who wish to enter an academic curriculum so that they will be prepared to continue their education in college following their high school graduation. It will cover basic chemistry, cellular biology, genetics, evolution, ecology, classification, and human physiology in greater depth than Biology. The curriculum integrates writing skills, critical-thinking skills, laboratory skills and dissection skills as they apply to the standards. In addition, the coursework will emphasize microscopy, calculating data, graphing and essay exam questions.

Prerequisite: 90% or higher in 8th Grade Science and ranked PSSA Science scores

HUMAN BIOLOGY***1 Credit**

This course is an introduction to the basic principles of human biology. Topics include basic chemistry in human nutrition; human body structure as it relates to human body movement and functions; human reproduction and development; and human genetics.

LIFE SCIENCE**1 Credit**

This course will continue the principles learned in Biology. Topics include cell biology, microbiology (lab), biodiversity (observation of the various kingdoms including systems of classification), and an introduction to human and plant anatomy including comparative anatomy labs/dissections.

INTRODUCTION TO ENGINEERING DESIGN* (PLTW) (1st Year) 1 Credit

Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use an engineering notebook to document their work.

APPLIED CHEMICAL SCIENCE**1 Credit**

This course is designed to provide students with the basic concepts involved in chemistry. Students are given the opportunity to apply the principles of the scientific method as a major part of this course. Hands-on activities are used to illustrate concepts and train students in science skills. Major concepts involved include matter and energy, chemistry in everyday life, wave properties, and electromagnetic relationships with matter.

CHEMISTRY**1 Credit**

Chemistry is designed to meet the needs of the academic student planning to attend college in the future. Students will concentrate on the concepts of matter and energy, its properties and changes. Through both in class activities and laboratory experiments the students will gain a background knowledge in stoichiometric relationships, composition of matter, formula writing.

Prerequisite: To qualify for chemistry a student must have a 70% or better in Algebra I.

HONORS CHEMISTRY***1 Credit**

This is an accelerated course designed to meet the needs of the advanced student planning to attend college and major in the science field in the future. Chemistry involves the study of matter, its properties, and changes. Through both in-class activities, and laboratory experiments, the student gains a background in stoichiometric relationships, gas laws, the composition and hierarchy of matter and formula writing. Students will concentrate on both qualitative and quantitative analysis in the laboratory. Those students completing the course with at least an 83% overall average can choose to elect the Advanced Placement course in chemistry offered during the senior year. Students who successfully complete chemistry may also elect other science courses, and can enter college chemistry during their freshman year at the introductory level.

Prerequisite: a 90% average or better in Algebra I^{KE} and currently enrolled in Algebra II.

Honors Chemistry will be required for all students planning to take AP Chemistry.

ADVANCED CHEMISTRY*

1 Credit

The Advanced Chemistry course is for college bound students with intended majors requiring one year or less of college chemistry. Advanced chemistry topics include solution chemistry, bonding, intermolecular attractions, collective properties, organic chemistry, nuclear chemistry, and thermodynamics. Emphasis will be placed on laboratory investigations and the application of topics to real world problems.

Prerequisite: a 90% average in Honors Chemistry and 90% or better in Algebra II and should have completed or currently be enrolled in Trigonometry.

Advanced Chemistry will be required for all students planning to take AP Chemistry.

ANATOMY & PHYSIOLOGY*

1 Credit

This course will investigate the concepts of Anatomy and Physiology including the following; major organ systems of the human body; the structure and function of each organ system; interrelationships among and between each organ system; and anatomical dissection and identification of the organ systems. This course emphasizes organizational and critical thinking skills while highlighting independent research. The student will be expected to independently conduct research, design experiments, and write scientifically, as well as use logic and reasoning in scientific inquiry. Students are evaluated and assessed on their individual performance in the following areas: examinations, laboratory exercises, laboratory reports, class presentations, research projects, research papers, homework/class work, and class participation. Students will be expected to read and discuss scientific journals and literature.

AP CHEMISTRY**

1 Credit

AP Chemistry is designed for the student in pre-professional modes such as engineering, medicine, or any other college major requiring an advanced background in chemistry. The course is involved in detailed study of chemical systems such as acid/base equilibrium, thermochemistry, organic chemistry, reaction kinetics, and redox reactions. Students will prepare to successfully complete the AP exam in the spring of their senior year, enabling them to possibly place out of introductory levels of college chemistry as freshmen. The laboratory investigations emphasize the topics likely to be of importance on the AP exam, as well as other topics which may be related.

The prerequisite courses or skills necessary for this course is at least an 85% average in Advanced Chemistry and a 90% or better in Algebra II and currently enrolled in Calculus.

PHYSICS

1 Credit

The primary objective of the Physics course is for students to solve problems, perform activities, labs, and projects to experience the concepts and equations of physics. The course is designed for a student who needs a high school level physics course in preparation for college level physics course. The course covers content in the following units of physics: mechanics, thermodynamics, fluids, waves and optics, and electricity and magnetism. A textbook is used as a guide for the course content. Supplement materials are used for

instruction throughout the course as well. All student work is organized in a 3-ring binder including a notebook. Labs in the course include video analysis of moving objects, friction lab, collisions lab, a solar panel lab, windmill lab, and others. Projects in the course include using physics concepts to design and build a Bridge, Drag Boat, Egg Drop, and Rube Goldberg device.

Prerequisite Courses: Be currently enrolled in or have completed Algebra II.

PRINCIPLES OF ENGINEERING* (PLTW) (2nd Year) 1 Credit

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. Students should have completed Algebra I. Introduction to Engineering is recommended before beginning this course. Students should be concurrently enrolled in Geometry and ready to learn basic trigonometric concepts.

Prerequisite Courses: Algebra I

GRAPHIC COMMUNICATION 1 Credit

Graphic Communication introduces students to the world of graphics. You may not realize but everything you see daily was produced by someone in the graphics industry. These examples could be Billboards, animated commercials/TV shows, T-shirts and even the unique variety of Snapchat filters. In this class, you will explore the programs used in the Graphics industry. These programs include Adobe Illustrator, Photoshop and Premiere. Students will learn the principles for producing visually appealing designs. Then, move towards creating a graphic that will be transferred onto your very own shirt using the screen printing process. Finally, students will write, direct, film and edit their own video.

BOTS* 1 Credit

BOTS is a project based class where students design, build, and document a robot to compete in one of the VEX Robotics Competition games. The VEX Robotics Competition is a strategic, game-based, engineering challenge using VEX hardware and programming. Throughout the project, students will gain experience in mechanical engineering, electrical engineering, and software engineering. Students will first learn the fundamentals of robot design and programming in introductory lessons and activities. Students will then use the fundamentals for the design, build, and documentation of a competition robot. Students will keep an engineering notebook journal that will contain brainstorm sketches, refined sketches, research notes, meeting notes, and other class/project information. Students will use Autodesk Inventor 3D CAD software, Autodesk Fusion 360, OnShape, and/or equivalent software for mechanical design. Students will program the robots using VEXcode block based and/or text based. The BOTS lab has a complete VEX field for testing and competition within the classroom.

Prerequisite Courses: Algebra II, Geometry, Intro to Engineering Design, and Principles of Engineering

ENGINEERING DESIGN AND DEVELOPMENT*(PLTW) (3rd Year) 1 Credit

Engineering Design and Development (EDD) is the capstone course in the PLTW high school engineering program. EDD should be taken as the final capstone PLTW course since it requires application of the knowledge and skills from the PLTW foundation courses. It is an engineering course in which students work in teams to design and develop an original solution to a valid open-ended technical problem, a robot for the VEX Robotics Competition, or the BotsIQ15 pound combat robot project by applying the engineering design process. The course applies and concurrently develops secondary level knowledge and skills in mathematics, science, and technology. The course is appropriate for 12th grade students who are interested in any technical career path. Since the projects can vary with student interest, the curriculum focuses on problem solving,

The BotsIQ option in EDD is an educational robotics competition for students. It is a spinoff of the popular BattleBots® television show. It provides students with a unique, hands-on experience allowing them to experience career options in the manufacturing, science, technology, engineering, and math fields. Students in EDD who choose the BotsIQ project will use the engineering process to design, develop, and build a 15 pound battle robot from concept to completion. Throughout the design process, students will be involved with one or more areas of the engineering process such as mechanical design, electrical design, manufacturing, documentation, marketing, and finance. Students will keep an engineering journal that will contain brainstorm sketches, refined sketches, research notes, and meeting notes. Students will use AutoDesk Inventor 3D CAD software. Students will learn about numerous manufacturing processes and decide the best option for each component. Students will compete with their bot in the Southwestern PA Bots competition and possibly the National Robotics League competition.

Prerequisite Courses: Algebra II, Geometry, Intro to Engineering Design (IED), Principles of Engineering (POE)

AP PHYSICS I: Algebra-Based****2 Credit**

AP Physics I: Algebra-Based is the equivalent of a first-semester college course in algebra-based physics. The course covers Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; and mechanical waves and sound. It will also introduce electric circuits. Students should take AP Physics I if they expect to take physics beyond the high school level. Students can take AP Physics I in place of Physics as a first year physics course. AP Physics 1 is offered as a dual-enrollment class and students also have the option to take the AP Physics 1 exam at the end of the spring semester.

Activities used in this course include keeping a notebook, solving problems, laboratory experiments, cooperative-learning sessions, discussions, demonstrations, creating and interpreting graphs, video analysis, creating models, and scientific and graphing calculators.

Prerequisite Courses: Algebra II, Honors Chemistry, Trigonometry is highly recommended or can be taken concurrently.

*****College in the High School course offered through Mt. Aloysius College and Saint Francis University. Separate application necessary.*****

INTRODUCTION TO GIS**1 Credit**

This course introduces basic concepts in Geographic Information Systems(GIS) and Geospatial Technologies. During this course, students will learn basic GIS principles and the application of GIS and GPS in their education and life. Concepts include but are not limited to analysis, management, representation of geographic information as well as data collection in areas such as construction, wildlife management, diseases and epidemics, natural disaster impact areas and recreational facilities (to name a few!) Students will use arcGIS and Google Earth to represent their data.

CIVIL ENGINEERING AND ARCHITECTURE (PLTW)***1 Credit**

Students learn important aspects of building and site design and development. They apply math, science, and standard engineering practices to design both residential and commercial projects and document their work using 3D architecture design software. Civil Engineering and Architecture assumes Students should have knowledge and experience from IED and/or POE PLTW foundation courses. It also assumes the completion of Geometry.

AEROSPACE ENGINEERING (PLTW)***1 Credit**

This course propels students' learning in the fundamentals of atmospheric and space flight. As they explore the physics of flight, students bring the concepts to life by designing an airfoil, propulsion system, and rockets. They learn basic orbital mechanics using industry-standard software. They also explore robot systems through projects such as remotely operated vehicles.

ENVIRONMENTAL SCIENCE**1 Credit**

The course asks the question "What makes Earth unique among planets?" The question is answered in the first four units, providing a background for understanding and discussing the natural functioning of the different Earth systems: geophysical systems, the atmosphere, the oceans, and, finally, natural ecosystems. The remaining units delve into human interaction and impact on the environment. In Environmental science students will explore the environment as a dynamic system in which humans exist. The first unit explores the connection between Earth's biodiversity and populations, Students then explore the impact of natural resources and their use on Earth. The course then moves into agriculture and society and humans and the environment. The course culminates with Earth Sciences, exploring the dynamics of Earth's lithosphere, hydrosphere, and atmosphere.

PRINCIPLES OF BIOMEDICAL SCIENCE (PLTW)***1 Credit**

In the introductory course in the PLTW Biomedical Science program, students explore concepts of biology and medicine to determine the factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems.

COMPUTER SCIENCE ESSENTIALS

1 Credit

PLTW CSE will introduce you to coding fundamentals through the block-based programming of apps. You will continue to sharpen your computational thinking skills by transitioning into text-based programming side-by-side with blocks, and finally into text-based programming in the Python® programming language. This course will empower students to develop computational thinking skills while building confidence that prepares them to advance to Computer Science Principles and Computer Science A.

LANGUAGE ARTS

English 9
 Honors English 9*
 English 10 (Keystone Exam Course)
 Honors English 10*(Keystone Exam Course)
 English 11
 Honors English 11*
 English 12
 AP English 12**
 Humanities
 Public Speaking
 Journalism
 Creative Writing I
 Creative Writing II
 Communication Studies

* Advanced Course

**AP Course

ENGLISH 9**1 Credit**

The primary objectives of this course are to enable students to examine and improve their understanding of literature, composition, and oral communication, complete the required literature reading for the academic core and extend upon this core by reading a minimum of four outside works, and closely examine the writing process and different styles of writing. The Pennsylvania Common Core Standards and Assessment Anchors and Eligible Content will be the focus.

The major units to be covered are: Short Story—used as an introduction to the various literary terms and devices incorporated in the text. Discussion of the themes will be promoted. Poetry—emphasis on style and technique, similes and metaphors will be examined. Epic poetry – used as an extension of poetry with emphasis on devices and techniques will be covered. Drama—an introduction to Shakespeare: universal themes and oral interpretations will be addressed. Novel— novels on the reading list and accelerated reader will be covered. A heavy emphasis will be placed on plot and theme. Writing—writing through the literature will be covered throughout the year. Grammar will be taught through composition.

The major activities and projects required for this course include novels that will be read independently and tested through Accelerated Reader. Several essays utilizing narrative, informative, and persuasive writing will be covered emphasizing PSSA and Keystone exam techniques and the PA Domain Scoring Guide. At least two major projects will be assigned.

HONORS ENGLISH 9***1 Credit**

Honors English 9 is an accelerated English survey course aimed at college bound students. This class offers students literary analysis, writing/composition, and reading comprehension with an emphasis on independent reading. Students will be writing in various modes including narrative, persuasive, and expository styles with writers' workshops focused on vocabulary, grammar, and style. Students will focus on literary classics in preparation for SAT tests, Keystone exams, AP Literature, and college expectations.

The major units to be covered are: Short Story—used as an introduction to the various literary terms and devices incorporated in the text. Discussion themes will be promoted. Poetry—emphasis on style and

technique, similes and metaphors will be examined. Epic poetry – used as an extension of poetry with emphasis on devices and techniques will be covered. Drama—an introduction to Shakespeare: universal themes and oral interpretations will be addressed. Novel novels on the reading list and accelerated reader will be covered. A heavy emphasis will be placed on plot and theme. Writing—writing through the literature will be covered throughout the year. Grammar will be taught through composition.

The major activities and projects required for this course include classic literary works that will be read independently and tested through Accelerated Reader. Several essays utilizing narrative, informative, and persuasive writing will be covered emphasizing PSSA and Keystone exam techniques and the PA Domain Scoring Guide. At least two major projects will be assigned.

Prerequisites: 90% or higher in 8th grade English, score in the 9-12 grade equivalency range on STAR Reader, and ranked PSSA scores.

ENGLISH 10 (Keystone Exam Course)

1 Credit

The primary objectives of this course are to provide instruction and practice in essential language skills in reading, writing, speaking, and listening, and to provide opportunities to use these skills in developing effective forms of communication through various activities and projects. It will provide students the opportunity to learn about themselves and their world through the experiences of others as presented in selected forms of literary genres. The students will write narratives, descriptions, expositions, character sketches, and persuasive papers. Grammar skills will be reviewed/taught when necessary as evidenced in students' writing projects. The major units to be covered include the short story, poetry, nonfiction, drama, The King Arthur Legend, and the novel. The literary focus will include the techniques and literary devices authors use to produce the total effect of the work.

HONORS ENGLISH 10* (Keystone Exam Course)

1 Credit

Honors English 10 is an advanced, comprehensive study of English: literary analysis, composition, and reading comprehension, including lessons on grammar and vocabulary. Literary selections represent an array of genre and time periods, and lessons will emphasize the authors' styles. Writing assignments will cover persuasive, informational, narrative, reflective, and descriptive modes, with rubrics stressing clarity and conciseness. Students will be challenged to understand the text and subtext of thematically and stylistically relevant articles and essays drawn primarily from current periodicals. Students will conduct research and use current technology to both gather and present information.

Prerequisites: 85% or higher in Honors English 9 or a 90% or higher in regular English 9 and score above grade level on STAR Reader

ENGLISH 11

1 Credit

The primary objectives of this course are to enable students to respond orally and in writing to information and insight gained from various texts, respond critically to various types of literature: essays, journals, poetry, biographies, plays, and the short story. They will analyze period ideas in various selections; write for a variety of purposes: comparison/ contrast, informative and persuasive. Students will compose and give short oral presentations and use the library for research.

The major units to be covered are Prehistory to 1780, 1750-1850, 1845-1880, 1865-1910, 1910-1930, 1930-1960, and 1960 to the Present.

The major activities and projects required for this course include, but are not limited to: explication of long poetic works, completion of the course project which is a job shadow for a career of choice, completion of Career Cruising.

HONORS ENGLISH 11*

1 Credit

English 11 Honors course is an enriched program designed for more advanced students. This rigorous course examines the works of significant American authors. Exploration of major pieces of American literature enhances students' understanding of literary style, and will develop students' skills in analysis and interpretation. Students will employ a variety of written and alternative assessments to demonstrate their ability to analyze, compare, and interpret literary works. Heavy emphasis will be placed on reading, writing, and researching. Students will read several American novels independently.

Prerequisites: 85% or higher in 10th grade Honors English or 90% or higher in regular English 10, and score above level on Star Reader.

ENGLISH 12

1 Credit

The primary objectives of this course are to enable students to read, discuss, and write about English literature. The students will recall, interpret, listen and speak intelligently about the historical periods in which this literature was written and will analyze literature through both figurative and literal means.

The major units covered are the Anglo-Saxon Period, Medieval Period, Elizabethan Age, Eighteenth Century, Romantic Age, Victorian Age, and the Twentieth Century.

The major activities and projects required for this course include multi-paragraph compositions, research paper, research presentation, career focused graduation project, tests, quizzes, and recitations.

AP ENGLISH 12**

1 Credit

The AP English course at Frazier High School will engage its participants in the careful reading and critical analysis of imaginative literature. Students will not only deepen their understanding and increase their pleasure in literature, but will develop critical standards for interpreting the effects writers create by means of artful manipulation of the language. Students in AP English will study individual works, their characters, action, structure, and the language.

Both large-scale literary elements such as form and theme, and smaller-scale elements such as figurative language, imagery, symbolism and tone will be emphasized within each selection. AP English students at Frazier will also be expected to consider literary selection from their historical standpoint so that they may learn to derive meanings in relation to their own experiences.

Students of AP English at Frazier will be expected to establish a familiarity with both English and American Writers and experience all genres within English and American literary domains.

Furthermore, since writing is an integral part of the AP English course, writing assignments will focus on critical analysis of literature and will include expository, analytical and argumentative essays. Also, well

constructed creative writing assignments will be included to help students appreciate and deepen their knowledge of what literary artistry is about. The goal of both types of writing is to increase the students' ability to understand what they have read and to explain clearly, coherently, and even beautifully what they understand of literary works and why they interpret them as they do.

Throughout the course, emphasis will be placed on helping students develop stylistic maturity which will include: wide-range vocabulary used with denotative and connotative accuracy, subordination and coordination; logical organization, enhanced by specific techniques of coherence such as repetition, transitions and emphasis. Rhetorical effectiveness must also be a part of the Advanced Placement regimen. Techniques such as controlling tone, maintaining consistent voice, achieving parallelism and antithesis must be practiced. A student of Advanced Placement will be made aware of stylistic effects and levels of diction. These differences are indicated most easily through fiction, poetry, and all literature that is studied throughout the course.

Finally, Advanced Placement students must be practiced in the recognition of varied literary collections through early, yearly, and diligent instruction of such material to attain the successful outcome of a high score on the Advanced Placement examination.

In addition, students must also complete a career focused graduation project.

Prerequisite: 85% or higher in 11th grade Honors English or 90% or higher in regular English 11.

*****College in the High School course offered through Mt. Aloysius. Separate application necessary.*****

HUMANITIES

1 Credit

This course is designed for juniors and seniors interested in learning about the art and culture of the Paleolithic Era through the Modern Era. A comparison of the different historical eras will be studied in terms of art, literature, music, philosophy, architecture, politics, and religion.

PUBLIC SPEAKING

1 Credit

Students are invited to improve their speaking skills by learning basic delivery skills of volume, rate, expression, and eye contact in short, fun personal speeches. Throughout the course, students will learn how to prepare a short Prezi presentation and speaker notes, give announcement, personal interest, introduction, award, demonstration, informative, and persuasive speeches, and create their own public service announcement. All speeches are prepared in class as students learn to choose speech topics, prepare outlines, revise speeches, practice, present speeches, and reflect upon speech presentations.

JOURNALISM

1 Credit

Students will develop interviewing, reporting, broadcasting, editing, and publishing skills to cover national, local and especially high school news. Students will create a number of project-based activities. Writing, public speaking and presentation making are all vital components to the course as well. Students will publish work through various means of media.

CREATIVE WRITING I

1 Credit

Creative writing involves creative thinking, which is the making of new connections among ideas. Taking the thoughts and putting them into words make for a new and deeper understanding of an idea.

The purpose of this course is to provide students instruction and opportunity to put their thoughts and feelings into words and those words onto paper in a clear, meaningful way through various kinds of writing.

Students will work individually and in small groups writing short stories, both fiction and nonfiction, writing various kinds of poetry, and composing other forms of imaginative writing, as per teacher discretion.

Writing assignments will involve using the writing process.

The final project is a collection of students' writings compiled into a book.

This course can help you improve as a writer, but only if you are willing to work at the job.

Only students who sincerely enjoy writing, and have maintained at least an 80% average in the previous year's English class, should take this course.

CREATIVE WRITING II

1 Credit

Taught in conjunction with the Creative Writing I course, second year students will have the opportunity to refine the writing skills and forms taught in Creative Writing I. Students will work with poetry, fiction, nonfiction and drama.

The purpose of this course is to expand writing skills by producing longer, more involved writings. All writing projects will be individualized according to the student's writing talents and interests. Projects must be formally presented and published. Students will refine editing skills and will be required to submit works in competitions and for formal publication.

Students must have passed Creative Writing I to take the class.

COMMUNICATION STUDIES

1 Credit

Communication studies will focus on two specific areas of the communication field: public speaking and high school journalism. Students will learn how to organize, prepare, and present a variety of speeches. The course will focus heavily on informative speech and persuasive speech.

The high school journalism curriculum will allow students to explore all phases of producing a newspaper. Students will write, edit, prepare layout, and publish articles for a fictional high school newspaper. They will also be required to maintain and meet deadlines.

Students will also complete a course project of either a video that reflects some aspect of high school life or a paper on some aspect of the media. Students will meet individually with the teacher to discuss components of each project.

SOCIAL STUDIES

- American Government
- AP American Government**
- Contemporary American Studies
- AP United States History**
- The Modern World
- AP European History**
- Personal Finance
- Sociology
- Psychology
- Geography
- Conspiracy Theory
- Pop Culture and Politics
- Economics

* Advanced Course
 **AP Course

AMERICAN GOVERNMENT

1 Credit

The American Government course is designed to provide an understanding of the development of our form of government, its workings today, and its increasing complexities. The course will begin with an examination of the creation of our democracy and Constitution, and then concentrate on the legislative, executive, and judicial branches of the federal government. Additionally, the election process and the Bill of Rights will be extensively studied.

AP AMERICAN GOVERNMENT**

1 Credit

AP American Government studies the operations and structure of the U.S. government and the behavior of the electorate and politicians. Students will gain the analytic perspective necessary to critically evaluate political data, hypotheses, concepts, opinions, and processes. Along the way, they'll learn how to gather data about political behavior and develop their own theoretical analysis of American politics. They'll also build the skills they need to examine general propositions about government and politics, and to analyze the specific relationships between political, social, and economic institutions. The equivalent of an introductory college-level course, AP American Government prepares students for further study in political science, law, education, business, and history.

Prerequisite: at least an 85 % average in American Government, and English 10^{KE} or English 11.

*****College in the High School course offered through Mt. Aloysius College. \$55 per credit. Separate application necessary*****

CONTEMPORARY AMERICAN STUDIES

1 Credit

The primary objectives of this course are to provide a sequential development of historical information for students to use in a variety of situations, providing practical experiences for students to use for better understanding their relationship to and functions in their nation, and encouragement and development of

comprehension, thinking, writing, and researching skills. A special emphasis on the interrelationships of cultures which have created the present American society will be provided.

The major topics/units include: The Progressive Era (1890-1920), World War I (1914-1919), The Roaring Twenties (1920-1929), The Great Depression (1929-1940), World War II (1940-1945), The Cold War (1945-1960), The Civil Right Movement (1955-1975), The Vietnam War (1960-1975), Nixon & Watergate (1968-1976), The Reagan Revolution (1980-1992), The 1990's & the New Millennium (1990-2001)

AP UNITED STATES HISTORY**

1 Credit

The primary objectives of this course are to provide students with factual knowledge to deal with problems in American History, assessment of materials for the purpose of determining validity and merit in a variety of sources, and promote and develop comprehension and writing skills appropriate for college level work. Skills and preparation for the advanced placement exams will be stressed. Document based, primary source questions will be used.

The major units to be covered are discovery through colonial establishment/Revolutionary Era, the Constitution and New Republic/nationalism and economic expansion, Civil War, industrialization/urban life/economic changes in America, U.S. foreign policy in the 20th century, economic challenges, and recent foreign policies and social changes.

Prerequisite: at least an 85 % average in Contemporary American Studies and English 10^{KE} or English 11.

*****College in the High School course offered through Mt. Aloysius College. \$55 per credit. Separate application necessary*****

THE MODERN WORLD: 1789 TO PRESENT

1 Credit

This course will examine some of the major historical events and periods of the modern era beginning with the Middle Ages, through the world wars, and up to history that is being made today. Students will be working on developing historical thinking skills such as interpreting primary sources and making historical arguments using relevant evidence.

AP EUROPEAN HISTORY**

1 Credit

In AP European History, students investigate significant events, individuals, developments, and processes from approximately 1450 to the present. Students develop and use the same skills, practices, and methods employed by historians: analyzing primary and secondary sources; developing historical arguments; making historical connections; and utilizing reasoning about comparison, causation, and continuity and change over time. The course also provides seven themes that students explore throughout the course in order to make connections among historical developments in different times and places: interaction of Europe and the world, economic and commercial development, cultural and intellectual development, states and other institutions of power, social organization and development, national and European identity, and technological and scientific innovations.

Prerequisite: at least an 85% in The Modern World: 1789 to Present and English 10 or English 11.

*****College in the High School course offered through Mt. Aloysius College. \$55 per credit. Separate application necessary*****

PERSONAL FINANCE

1 Credit

This course covers the management of household and personal finances. It provides an overview of financial concepts with special emphasis on their application to issues faced by individuals and households: budget management, savings, housing and other major acquisitions, borrowing, insurance, investments, meeting retirement goals, and estate planning. The course provides an overview of principles and techniques for the management of a household's assets and liabilities. In addition, it studies financial institutions and their relationship to households, along with discussion of financial instruments commonly held by individuals and families.

SOCIOLOGY

1 Credit

This course provides students with a comprehensive examination of the basic concepts, principles, and methods central to the scientific study of the evolution, structure, and function of human society. The first goal of this course is to teach students to think like sociologists. The second goal is to help students develop a sociological imagination, which will enable them to view their own lives within a larger social and historical context. The third goal is to help students understand and thus appreciate the rich diversity that is possible in social life by exposing them to data from a wide variety of cross-cultural and historical sources.

PSYCHOLOGY

1 Credit

This course is an introduction to the study of behavior in humans as it applies to mental processes. Students will explore topics such as development, social psychology, personality, states of consciousness, stress, and psychological disorders. Both normal and abnormal studies will be included. This course will challenge students to use their metacognitive abilities in order to develop a meaningful understanding of their sense of self.

GEOGRAPHY

1 Credit

Geography will help students be more informed about the people, places, and cultures around them. The course begins locally with the study of nearby locations, like Fayette County, PA & eventually expands to the study of the United States & eventually covers all 7 continents & all the countries of the world. Students complete Map Quizzes, WebQuests, Study Guides, etc for each Unit/Chapter covered throughout the class. Units include Fayette County, PA, The State of Pennsylvania, the United States, U.S. Lakes & Rivers, Canada, Central & South America, The Caribbean, Europe, The Middle East, Oceania/Australia, Asia, Africa

CONSPIRACY THEORY

1 Credit

This class covers a variety of American-based conspiracy theories such as the Moon Landing Hoax, the assassination of JFK, Paul is Dead, the 27 Club, Area 51, music, and pop culture. It also explores the

psychology of why people believe in conspiracy theories and need to know the desire humans possess. The class culminates with a research project into the conspiracy theory of the student's choosing.

POP CULTURE & POLITICS

1 Credit

The purpose of this course is to allow students to better understand the impact of historical and political events on American society. Students will learn about major historical and political events in U.S. history and, once they have a thorough understanding of an event, we will then undertake an examination of how that event is depicted, and its impact on popular culture. Topics will include political assassinations, war, protest music, elections and social media, and political scandals, among others.

ECONOMICS

1 Credit

Economics is the study of how human beings attempt to satisfy needs and wants with scarce resources. The first part of the course will focus on the fundamental concepts of Economics including, but not limited to: supply, demand, and scarcity. Other topics of study will include the organization of individual businesses and corporations, the labor market, the role of government in regulating the economy and developing economic policy (i.e. taxation and the Federal Reserve System), banking, investing (stocks, bonds, mutual funds), and the modern global economy.

WORLD LANGUAGES

Spanish I
 French I
 Spanish II
 French II
 Spanish III*
 French III*
 Spanish IV*
 French IV*

*Advanced Course

SPANISH I**1 Credit**

The primary objectives of this course are to enable students to speak the Spanish language with correct pronunciation and intonation at a beginning level. In addition, students will develop a working vocabulary of basic Spanish words. Students will be able to converse on familiar topics using elementary Spanish grammatical construction. Students will also be able to comprehend, speak, read, and write at a basic level while gaining an understanding of Spanish people and their culture and traditions.

Major units covered are: greetings and salutations, numbers, time, months, days of the week, weather conditions, seasons, expressions of like and dislike, food, body parts, classroom objects, clothing, places in the community, family, gender and number agreement, subject pronouns, adjectives, ser and estar, a vast number of nouns, and verbs in present tense.

FRENCH I**1 Credit**

The primary objectives of this course are to enable students to speak, write, read, and understand basic (survival) French. Students will be able to express both positive and negative thoughts, ask & answer simple questions, and discuss common, everyday activities.

Units in this course introduce basic vocabulary & grammar and offer an introduction to French culture. The following topics are covered: greetings; family & friends; colors; numbers; time; days & months; seasons & weather; describing people; professions; personal possessions; invitations; action verbs & their negatives; places; clothes; and school.

SPANISH II**1 Credit**

The primary objectives of this course are to enable students to develop oral and written self-expression with emphasis on pronunciation, intonation, and grammatical construction while expanding working vocabulary from Spanish I. Students will know methods and procedures of more advanced Spanish grammar structure. Students will increase their comprehension of the written and spoken language. Students will write more advanced sentences and dictation. Students will expand their knowledge of Spanish people and culture.

The major units to be covered are: extensive review of Spanish I, reflexive pronouns and verbs, authentic foods, personal hygiene, family, clothing, and leisure activities; as well as in depth discussions about stereotypes, concluding with a virtual tour of Mexico.

Prerequisite course: Spanish I

FRENCH II

1 Credit

The primary objectives of this course are to enable students to speak, write, read, and understand French at an intermediate level. Students will be able to ask about and discuss events in the present, past, and future.

Units in this course introduce intermediate vocabulary & grammar and allow students to discover more about Francophone culture around the world. The following topics are covered: review of French I; food & drink; helping others; parts of the body; narrating past events (the passé composé & the imparfait); countries of the world; and the future.

Prerequisite course: French I

SPANISH III*

1 Credit

The primary objectives of this course are to enable students to develop oral and written self-expression on an intermediate level. Students will develop speaking and composition skills on assigned topics using structures and vocabulary presented in class. Students will use present, past, and future tenses. Students will also delve into the world of art and Spanish speaking artists throughout history.

The major units to be covered are: preterite tense, imperfect tense, present progressive, simple future.

Prerequisite courses: A 75% or higher in Spanish II

FRENCH III*

1 Credit

The primary objectives of this course are to enable students to speak, read, understand, and write French at a more advanced level. Students will begin to read short literature selections and informational articles written in French.

Units in this course introduce advanced vocabulary & grammar and offer greater exposure to French culture and history. The following topics are covered: review; daily routines; physical appearance & emotional state; household chores; obligations; vacation activities; the natural world; shopping; traveling abroad; staying in France; and health & wellness. In addition, students will read authentic French literature from various time periods. Cultural readings will focus on fashion; music; nature; travel & tourism; & different eras in the history of France.

Prerequisite courses: a 75% or higher in French II

SPANISH IV*

1 Credit

The primary objectives of this course are to enable students to expand working vocabulary acquired in the first three levels of Spanish, and to further understand and use advanced grammatical structures. Students will read, translate, and understand more advanced Spanish literature, speak and write Spanish at a more advanced level, and demonstrate correct usage of composition and creative writing skills at a higher level. The major units to be covered are: preterite and imperfect, future tense, poetry, various types of literature, and art.

Prerequisite courses: a 75% or higher in Spanish III

FRENCH IV*

1 Credit

The primary objectives of this course are to enable students to expand working vocabulary acquired in the first three levels of French, and to further understand and use advanced grammatical structures. Students will read, translate, and understand more advanced French literature; speak and write French at a more advanced level; and demonstrate correct usage of composition and creative writing skills at a higher level. Students will understand the history and geography of French-speaking countries and Francophone influences in the world today.

Thematic units in this course focus on French cities; personal relationships; and education & careers. Students will also explore the regions of France; Francophone countries; and the Impressionist art movement through various projects. As time allows, literature selections will include: short stories; traditional folk tales; and novels (*Le fantôme de l'opéra* by Gaston Leroux & *Le petit prince* by Antoine de Saint-Exupéry).

Prerequisite courses: a 75% or higher in French III

ARTS

Art
Art and Design
Music Appreciation
Music Technology
Music Theory

ART

1 Credit

The objective of this course is to extend and refine abilities to investigate and respond to the visual arts. Students are able to apply more complex technical skills as they manipulate the elements of art and principles of design, art media, and original ideas. They will produce original works of art that are developed from preliminary sketches and ideas.

The students will demonstrate the ability to incorporate all that they have learned about art history, interdisciplinary connections, and the use of technology within their art using a variety of techniques and media. Examples will include, but not be limited to the following: painting in acrylic, shading, watercolor, collage, 2-D & 3D design, ceramics, graphic arts, and oil & chalk pastels.

Evaluation will be based on art production, teacher observation, expanded vocabulary, student/teacher assessments, class participation, the display of their art, and overall growth.

ART AND DESIGN

1 Credit

The objective of this course is to extend and refine abilities to investigate and respond to the visual arts in an innovative manner. Students are able to apply more complex technical skills as they manipulate the elements of art and principles of design, art media, and original ideas. Student work will be geared toward “real-life” artistic expression, how we see art in the world around us in a 2-dimensional sense and how to morph 2-dimensional work into 3-dimensional sculptural forms.

The students will demonstrate the ability to incorporate all that they have learned about art history, interdisciplinary connections, and the use of technology within their art using a variety of techniques and media. Projects will reflect the themes of artistic careers, innovation, and problem solving skills.

Evaluation will be based on art production, teacher observation, expanded vocabulary, student/teacher assessments, class participation, the display of their art, and overall growth.

MUSIC APPRECIATION

.5 Credit

Music Appreciation allows students to explore more advanced areas of music without requiring previous instrumental experience. Topics of the course include music technology, music theory, music history, and learning basic keyboard skills. Students will explore technological aspects of music including production websites such as Soundation and Noteflight. Students will also learn about the history of music from the past 100 years in the United States, including genre and style, artists, and cultural relevance.

MUSIC TECHNOLOGY

1 Credit

Music Technology is a course for any student in grades 11 and 12. Students will discover and explore introductory concepts used in music sequencing, notation and recording. No prior musical experience is needed. Students will create music using sequencing/editing software. Students interested in the current methods of music creation and production should consider taking this course.

MUSIC THEORY

1 Credit

Music Theory is a course open to any student in grades 11 and 12. Students will explore music notation and composition, theory concepts, chord structures, and traditional 4-part music writing. Prior music experience is strongly recommended, and students that do not have musical experience should seek approval from the teacher before taking this class. Band students that are interested in writing music or furthering their understanding of music should consider taking this course.

FAMILY AND CONSUMER SCIENCES

Human Development
Foods and Nutrition

HUMAN DEVELOPMENT

1 Credit

Human Development is a course designed for all students interested in studying early childhood development to prepare them for having children and/or for pursuing future careers related to human developmental services, such as teaching, nursing, social work, psychology, child care, etc. The course focuses on the growth and development of the child and how s/he transitions through the Human Life Cycle physically, emotionally, socially, intellectually and morally.

Course topics include: family dynamics, childhood theories, role of a parents/child caregiver, preparing for childbirth, birth defects/childhood diseases, toy selection and safety, positive/negative reinforcement and properly caring for an infant/child up through adolescence. Students will use problem solving, creativity and hands on skills to implement project based learning activities for infant to school aged children. Students will have the opportunity to carry a RealCare infant simulator, in addition, to engaging in a job shadowing experience at our Frazier PreK program.

FOODS AND NUTRITION 1 Credit

Foods and Nutrition is a course designed to teach skills that apply to human nutrition, food preparation and overall wellness practices. Students will collaborate ideas of eating healthy, food production and preparation and in making healthier food choices at home, eating out or in their shopping practices. Students will review the factors that influence our food selection, physiologically, culturally and socially. They will assess the nutrition needs across the life span. They will look at the technology used in cooking and experiment with the food science principles while preparing recipes. They will sample the recipes they prepare working through the basic courses of a meal: appetizers, salads, side dishes, entrees, casseroles, desserts and baked goods. Students will define the basic fundamentals of making healthier lifestyle choices in bettering their overall physical and mental wellness. A variety of community resources will come together in this hands-on interactive class helping students to become more independent in preparing to live life out on their own and/or for pursuing future careers, such as hospitality, marketing, chef, baker, dietician, nutritionist, personal trainer, restaurant service staff and management, etc.

ADDITIONAL COURSES

Freshman Seminar
9th Grade Rotation
Career Exploration
Current Events
Personal Fitness
Physical Education 11/12

FRESHMAN SEMINAR

1 Credits

All 9th Grade students are required to enroll in Freshman Seminar. This is a transition course designed to provide students with the skills and knowledge necessary to meet expectations in high school and beyond.

The main focus of the curriculum includes:

1. **Research Skills** - This course addresses the academic standards in writing. Students will review the writing process. This course also introduces students to research skills and the senior project with a focus on the MLA style of research writing. Students will learn the validity of responsible research using materials from the library as well as responsible Internet use. One major project, a research paper, is required.
2. **Test Taking Skills** - Throughout this course, students will become familiarized with different types of test preparation: note-taking, time management, review methods for tests, and strategies and skills for taking tests. Students will have an understanding as well as critically analyze different types of test questions to become more successful test takers. Completing this portion of the Freshman Seminar coursework requirements this year will not only prepare students for upcoming assessments such as tests, but it will also help them achieve a successful academic high school career by facilitating their transition into the work and expectations that are awaiting them in high school.
3. **Study Skills** - This class is designed to help students improve their learning effectiveness, attitudes, and motivation towards learning. The following are part of the curriculum designed to help students reach their maximum potential: Active Listening, Note Taking Skills, Textbook Reading and Study Methods, Graphic Organizers, Study Space, and Memory Techniques.
4. **Presentation Skills/Public Speaking** - In this course, students will learn the skills needed to make an appropriate impression in their professional and personal lives. These skills are essential to making a lasting impact on other professionals as well as handling personal matters.

9th Grade Rotation

2 Credits

The 9th Grade Rotation course consists of 4-9 week courses. The courses and their descriptions are:

1. **Technology 9** is designed to provide students with a complete understanding of the Google Applications that will be used throughout the high school. The course is designed around three

objectives: 1) develop an understanding of Google Chromebooks; 2) develop an understanding of managing Google Drive; and 3) develop an understanding of the Google Applications including Gmail, Google Docs, Google Slides, Google Sheets, and Google Sites.

2. **Wellness** is a nine weeks course where students will be assessed on their ability to understand and participate in physical activities that develop motor skills and physical fitness. This will be accomplished through instruction in the following activities: Team handball, volleyball, lacrosse, Ultimate Frisbee, soccer, basketball, football, eclipse ball, tennis, badminton, speedminton, golf, and cooperative games. Skills and lead up games specific to each sport will be progressively taught culminating into game play. Students will also explore the history and terminology of each sport, game strategies, fitness activities and development of teamwork/sportsmanship. The course will also follow up with the physical fitness testing. Units may be added or omitted due to weather and availability. Safety concepts, rules, and etiquette are emphasized in all activities.
3. **Music Appreciation** allows students to explore more advanced areas of music without requiring previous instrumental experience. Topics of the course include music technology, music theory, music history, and learning basic keyboard skills. Students will explore technological aspects of music including production websites such as Soundation and Noteflight. Students will also learn about the history of music from the past 100 years in the United States, including genres and styles, artists, and cultural relevance.
4. **Family and Consumer Science 9 (FaCS9) Pathways** class will focus on students nurturing themselves and others in taking an increased responsibility for living independently. This class will be quarter length and worth .5 credit. An integrated approach will be used to help students identify, create and evaluate goals and alternative solutions to significant problems of everyday life. Performance based assessments will be the foundation of student learning. Students will: identify resources and how to obtain consumer goods and services; create a budget, and show the relationship for managing income, expenses and savings; explain one's consumer rights and how they are protected; assess the factors affecting the availability of housing; deduce the importance of time management skills; solve dilemmas using a practical reasoning approach; practice stress management strategies; define how to properly care for oneself, including personal hygiene and basic first aid; demonstrate tools used to effectively communicate with others; plan a menu and describe the effectiveness of the use of meal management principles; set positive short-term and long-term (career oriented) goals; complete a Holland Code personality test, match results to jobs and investigate one further and create a job seeking portfolio, to include how to obtain a work permit, fill out a job application and complete a resume and reference resource page.

CAREER EXPLORATION (All 10th grade College Prep and Career Prep students) 1 Credit

This course is designed to help students explore a variety of careers to consider and begin planning a career path. This Career Exploration Course is designed to help students become proficient in core areas to ensure success after high school. The course is designed around five objectives: (1) Solving Problems And Thinking Skillfully (2) Communicating Effectively, Applying Technology (3) Working Responsibly (4) Planning And Managing A Career (5) Managing Resources

CURRENT EVENTS

1 Credit

This course encourages students to read and watch the news and hold class discussions on the matters. This course will focus on media coverage and the difference between biased and unbiased news events.

PERSONAL FITNESS (11th and 12th grade only)

1 Credit

This course is designed to give students the opportunity to learn fitness concepts and conditioning techniques used for obtaining optimal physical fitness. Students will benefit from comprehensive weight training and cardiorespiratory endurance activities. Students will learn the basic fundamentals of strength training, aerobic training, yoga, stretching, dynamic warm-ups and overall fitness training and conditioning. Course includes both lecture and activity sessions. The concept of wellness, or striving to reach optimal levels of health, is the cornerstone of this course and is exemplified by one of the course objectives: students designing their own personal fitness program as a way to develop the skills necessary to become fit and achieve some degree of fitness within the course.

Course can only be taken once during your high school career.

PHYSICAL EDUCATION 11/12

1 Credit

This course is designed for students to gain a basic knowledge of team and individual sports/activities. Team and individual sports/activities will include, but are not limited to: Team handball, volleyball, lacrosse, Ultimate Frisbee, soccer, basketball, football, eclipse ball, tennis, badminton, speedminton, golf, and cooperative games. Skills and lead up games specific to each sport will be progressively taught culminating into game play. Students will also explore the history and terminology of each sport, game strategies, fitness activities and development of teamwork/sportsmanship. The course will also follow up with the physical 20fitness testing.

Can only be taken one time per school year.

LEARNING SUPPORT

Senior High Math
Senior High English

SENIOR HIGH MATH

1 Credit

The general objectives of this course are to develop student skill levels in the areas of content, operations, application, measurement, with an emphasis on transition examples to develop everyday living skills. Skill levels will be developed to an accuracy level appropriate to each student's individual differences.

The major units to be covered are life skills on the job, skills for vocational training, survival math skills, and skills for transition from high school to real life situations.

Major activities and projects required for this course include handling a checkbook, payroll clerk skills, cash register and job skills training, and varied activities for transition to real life situations.

The learning support program is designed to be implemental for remediation in all major subject areas and addresses students who have been identified through psychological and diagnostic tests, faculty referrals, and observations.

These students are remediated in subject areas that show progressive rates that are not sufficient to maintain passing grades. Through resource room techniques and individual educational prescriptions, students are monitored and rated on their individual rates of progression in deficient subject areas.

Students are graded according to progression and, when possible, are mainstreamed or included in the class into which progression was inadequate.

SENIOR HIGH ENGLISH

1 Credit

The purpose of this class is to provide learning support students remediation in the areas of English Language Arts. This class will assist students in learning the basic fundamental skills when reading. This class will expose students to grade level materials while instructing at their reading level to help improve their reading skills. The class will work on skills including main idea, summarizing, figurative language, fact and opinion, analogies, multiple meaning words, and context clues as well as increasing fluency and comprehension. Guided reading will also be worked on where students will work on critical skills using short texts. Skills such as visualization, questioning, text connections, making inferences, and predicting will be studied.

CENTRAL WESTMORELAND CAREER AND TECHNOLOGY CENTER

Central Westmoreland Career and Technology Center (CWCTC) in New Stanton provides 23 programs that allow students the opportunity to increase their technical ability in order to become prepared for life after high school.

They are no longer a “vo-tech” school. They are now a part of the NEW PA Career and Technical Education system.

Central Westmoreland CTC prepares students for today’s economy and workforce needs by balancing meaningful career and workplace skills along with college readiness skills. This is done through both academics and hands-on learning. Many students graduate from the CTC with industry certifications. This allows them to enter directly into the workforce, apprenticeships, or colleges and trade schools. Students in certain programs can even earn college credits while attending the CWCTC.

- Automotive Collision Technology
- Automotive Mechanics Technology
- Computer Information Science
- Construction Trades
- Cosmetology
- Culinary Arts
- Electrical Technology
- Health Occupations Technology
- HVAC & Steamfitting
- Horticulture
- Logistics and Warehouse Management
- Machine Trades
- Multimedia Design
- Masonry Technology
- Powerline
- Protective Services
- Restoration and Design
- Robotics Engineering
- Service Occupations
- Sports Medicine
- Welding and Metal Fabrication

AUTOMOTIVE COLLISION TECHNOLOGY

4 Credits

Automotive Collision students will learn the skills needed to repair, reconstruct, and finish damaged vehicle bodies, and external features. In a garage setting, students will learn maintenance and safety standards of the automobile industry. They will have the opportunity to work with frame straightening equipment, complete car panel replacement, and in a spray booth, which includes state- of- the- art water-based technology. Students will also practice customer service skills and estimate the cost of vehicle repairs. Certification opportunities; SP2 & OSHA 10

AUTOMOTIVE MECHANICS TECHNOLOGY**4 Credits**

Students who choose this program will be prepared to work with the latest technology that will provide them with the skills needed to repair, service, and maintain automobile systems and their components. Students will receive instruction in brake systems, electrical systems, fuel systems, engine performance and repair, suspension and steering, and air conditioning. Critical thinking skills will be employed and strengthened through the diagnosis and repair of current model vehicles. System training simulators are utilized and students will learn the procedures for State Inspection and Emissions. Certification opportunities; ASE, PA State Safety Inspection & Emissions, SP2 Safety/Pollution, A4, Lifting it Right, EPA 609, Refrigerant

COMPUTER INFORMATION SCIENCE**4 Credits**

Students in the Computer Information Science classroom will be instructed in various programming languages. Students will gain an understanding of computer fundamentals, Microsoft Office, HTML, Javascript, CSS, C++, Java, and Linux Operating Systems. Students will develop web pages and sites and will learn to troubleshoot backend and frontend applications in a variety of workplace environments. Certification Opportunities; Microsoft Applications, Oracle Data Modeling/SPL, Oracle Java Programming

CONSTRUCTION TRADES**4 Credits**

Students will be instructed in a variety of the skills in several construction trades areas including carpentry, electrical, masonry, plumbing, and equipment operating. Students will learn the following carpentry skills, cutting, shaping and installation of building materials during the construction of buildings, bridges, concrete formwork, etc. Students will learn aspects of the electrical trades by installing and repairing wiring to maintaining electrical systems. They will also need to know relevant safety regulations and electrical codes to ensure that you perform your job properly. Students will study the art of masonry which includes bricks, concrete blocks, or natural stones to build structures that include walls, walkways, fences, and chimneys. Students will learn the plumbing of the system of pipes, tanks, fittings, and other apparatus required for the water supply, heating, and sanitation in a building. This program also prepares students to safely maintain and operate different pieces of diesel equipment such as skid loaders and mini excavators. Student learning will include cost estimating and blueprint reading, use and maintenance of power and hand tools, general safety and building code requirements. Certification opportunities; OSHA 10, OSHA 30, American Ladder Safety.

COSMETOLOGY**4 Credits**

A salon environment allows students to practice and prepare to become licensed cosmetologists. Students will gain skills in haircutting and shampooing techniques, hair styling, chemical treatments, manicures and pedicures, as well as facial treatments. Information and training will be focused on salon safety and sanitation, customer service, and applicable labor laws and regulations. Students who successfully complete the 1250 hours of coursework will be eligible to take the PA State Board of Cosmetology Examination and

may become certified as a licensed cosmetologist upon passing the exam. Certification opportunities; Licensed Cosmetologist, Licensed Nail Technician

CULINARY ARTS

4 Credits

The students will gain the skills to effectively work in the hospitality industry. Instruction will focus on selecting, storing, preparing and serving food, waitstaff training, menu planning and basic nutrition. Food safety and sanitation and learning the proper techniques to use and care for commercial equipment will be taught as well. Throughout the course, students will receive an introduction to baking and pastry arts, to include cake decorating. Instruction and on the job training will occur in our industry equipped kitchen and restaurant type setting. Certification opportunities; SP2, OSHA 10, Serve Safe - Allergens, Food Handler, Manager, ProStart COA, Rouxbe, Heartsaver First Aid/CPR, ACF (CFC), ACF (CC)

ELECTRICAL TECHNOLOGY

4 Credits

Skilled electricians are needed to perform work in residential, commercial, and industrial settings. Students in this program will learn to install, operate, maintain and repair electrical systems. Use of electrical codes, circuit diagrams, and blueprint reading will be key components. Students will gain valuable experience working with transformers, capacitors, resistors, and conduit bending resulting in a solid background to working in the electrical field. Certification opportunities; OSHA 30, Ladder Safety, Heartsaver First Aid/CPR

HEALTH OCCUPATIONS TECHNOLOGY

4 Credits

Students choosing this program will gain knowledge to assist them in preparing for a future career in a health related field. The class will focus on basic structures and functions of the human body, related diseases with associated terminology, legal and ethical aspects of health care, and communication. Nutrition, safety, infection control, emergency care, and disaster preparedness are also studied. Students will combine core book knowledge with skills practice in order to be ready to meet the needs of the healthcare industry. Certification opportunities; AMCA-PCT Testing, First Aid/CPR

HVAC & STEAMFITTING

4 Credits

The need for trained technicians continues to grow in this field. Students will learn to repair, install, service and maintain heating, air conditioning, and refrigeration systems as well as installing, assembling, fabricating, maintaining, and repairing mechanical piping systems. Students will learn diagnostic techniques, blueprint reading, the use of testing equipment, electronic and pneumatic control systems, and the principles of electricity, electronics and mechanics as each relates to the industry. Students will also learn how to overhaul, repair, and make adjustments to various units and parts. Certification opportunities; OSHA 10/30, EPA, 608 Refrigerant

HORTICULTURE**4 Credits**

Our horticulture program will provide hands-on opportunities for our students to learn aspects of greenhouse management, landscaping design and construction, and floral design and construction. Students will explore basic scientific principles and plant science as each relates to understanding plants and their management and care in our greenhouse and outdoor setting. Students will use tools and equipment safely and correctly to install landscaping materials and cultivate plant production. Customer service is highlighted as well. Certification opportunities; Private/Commercial Pesticide License, OSHA, PUNA

LOGISTICS AND WAREHOUSE MANAGEMENT**4 Credits**

The need for trained material handlers continues to grow. Students in this program will gain practical application by working in the school's distribution system. Skills taught will include maintaining inventory, receiving and shipping goods and how to operate electrical forklifts and pallet lifts. Students will learn about the many types of documents used in logistics including purchase orders, requisitions, barcodes, and invoices. The importance of storage space, inventory control, and shipping and receiving practices will be emphasized. Computers, TrackPro, and UPS Shipping systems are technology aspects included in the instruction. Certification opportunities; Forklift Operating License, OSHA 10, OSHA 30

MACHINE TRADES**4 Credits**

This program prepares high school students to apply technical knowledge and skills to plan, manufacture, assemble, test and repair parts. The Machine Trades Technology program is a NIMS (National Institute of Metalworking Skills) certified program that will give students proficiency in using rulers, micrometers, dial calipers and blueprint reading capabilities. Students in this classroom setting will learn to set up and operate a variety of machines including lathes, drilling presses, milling machines, grinders, and computer operated equipment (CNC). Safety measures will be emphasized throughout the program. Certification opportunities; NIMS

MULTIMEDIA DESIGN**4 Credits**

Students in this program will be able to apply knowledge and skills in the field of multimedia design. The elements and principles of art are the basis of good design. Combined with graphic design, audio, visual, web introduction, and photography this course provides the instruction necessary to develop a creative concept into a final visual communication product. Oral and written communication, customer service, and display production are a focus. Students will design, edit, and create projects using hand illustration and computer design software such as Adobe Illustrator, InDesign, Photoshop, Premiere, and AfterEffects. Students can earn Adobe Certifications. Certification opportunities; ASA

RESTORATION AND DESIGN**4 Credits**

Students in this program will be prepared to apply technical knowledge and skills to finish exterior and interior structural surfaces by applying protective or decorative coating materials, such as paint, stain, and wallpaper. Includes instruction in surface preparation; selecting, preparing, and applying finishes. Students will learn equipment operation and maintenance; finish selection; safety and clean-up; environmental effects on finishes; adhesion properties; and applicable codes and standards. Design, color theory, and faux finishes are also explored. Certification opportunities; NCCER CORE, National Ladder Safety, OSHA 10

POWERLINE**4 Credits**

Students will gain technical knowledge and skills in installation, troubleshooting and repair of telecommunication equipment of all kinds. Throughout the course, students will gain a fundamental understanding of electricity and electronics and will learn about fiber optics and copper based systems. CWCTC students will have the opportunity to study pole and tower climbing techniques, trenching, high voltage installation, maintenance and inspection. safety and applicable codes and standards in regards to the powerline and telecommunications fields. Certification opportunities; National Ladder Safety, OSHA 10, Copper Networking, Fiber Optico

PROTECTIVE SERVICES**4 Credits**

Our instructional program focuses on three areas of learning: firefighting services, emergency medical technician training, and law enforcement. Students will apply technical knowledge and skills required to work in the public safety sector and will be expected to learn a minimum level of proficiency in all areas of the training program. Students have the ability to earn various certifications during their time in the program. The program focuses on personal safety and the relationship between the public safety agencies. Skill sets within the program include vehicle and equipment operations, application of math skills, communication skills, and pre-hospital emergency medical assessment and treatment. Students will participate in live fire exercises in a simulated residential burn building. Certification opportunities; (EBM Program) ICS 100/700, HMA, PSFA Rope I, II, PA-DOH Basic Vehicle Rescue, (Exterior & Interior), First Aid/CPR

ROBOTICS ENGINEERING**4 Credits**

This class is about electromechanical engineering in which students will learn a combination of electronics, mechanical drives, hydraulics, and programming. Students who enjoy STEM activities will enjoy this classroom and be engaged in designing, developing, and testing of electromechanical devices, automatic control systems, and servomechanisms. There is a focus on industrial automation. Certification opportunities; Certified Electronics Technician, Soldering Certifications 2 & 3

SERVICE OCCUPATIONS

4 Credits

Service Occupations is an innovative program focusing on training students in a diverse array of skill sets in service-related employment areas. Students will learn in an environment that fosters good work ethic, competitive time on task and appropriate work skills for each identified career area. The Service Occupations curriculum encompasses the areas of workplace safety, grounds maintenance, cleaning practices, housekeeping, custodial and retail stock, as well as, kitchen safety, cooking and baking, food preparation, dining room services, commercial dishwashing and commercial laundry services. All areas are instructed with the intent of achieving a level of competency commensurate with competitive employment. Certification opportunities; American Ladder Institute, ServeSafe Food Handler, First Aid/CPR

SPORTS MEDICINE

4 Credits

Students will learn the skills necessary to become a rehabilitation aid. They will gain knowledge in medical terminology, anatomy, physiology, and orthopedics. In a rehabilitation lab setting, students will learn how to work with patients in regards to physical therapy treatment plans, how to safely and correctly use equipment, and how to practice taping and wrapping techniques. Additionally, there is a focus on concussion management, emergency medicine, CPR and first aid. Documentation and communication skills are highlighted throughout the course. Certification Opportunities; 7 Credits for Medical Terminology, A&P; Duquesne University; PSU Fayette

WELDING AND METAL FABRICATION

4 Credits

Welding is the most common way to permanently join metal parts. Students in this class will learn technical knowledge and skills to join or cut metal surfaces using stick welding, tig welding, mig welding, and flux core welding. Safety practices are a focus in this program. Instruction includes welding symbols, properties of metals, types and uses of electrodes and welding rods, and blueprint reading. Certification Opportunities; AWS Sense