
**Greater Latrobe
Senior High School**

Course Catalog

2014 - 2015

TABLE OF CONTENTS

SECTION

I.	Introduction	2 – 7
II.	Core and Elective Subject Offerings (Course Descriptions)	
A.	Language Arts	8 – 13
B.	Mathematics	14 – 19
C.	Science	20 – 23
D.	Social Studies	24 – 27
E.	World Languages	28 – 31
F.	Business and Information Technology	32 – 34
G.	Health and Physical Education	35 – 37
H.	Practical Arts	
1.	Family and Consumer Science	38 – 40
2.	Technology Education	41 – 43
I.	Fine Arts	
1.	Art	44 – 47
2.	Music	48 – 50
III.	Online Education	51 – 52
IV.	Partnership Programs	53 – 55
VI.	College in High School Program	56 – 58
VII.	Eastern Westmoreland Career and Technology Center	59 – 71

Greater Latrobe Senior High School Latrobe, Pennsylvania

The Senior High School complex is a well-maintained physical plant which houses more than 1,000 students in grade 10, 11, and 12. Building features include: an auditorium, two gymnasiums, a swimming pool, planetarium, Center for Student Creativity, television studio and library/media center with computerized circulation systems and Internet accessibility.

Construction of high school students' schedules centers on the fulfillment of graduation requirements in the core subject areas of English, mathematics, science, and social studies. Students can take college level courses designed to prepare students for higher education, or they can take advanced placement courses, which are the most rigorous and demanding courses the district offers. Students wishing to explore vocational education may elect to complete their academic core requirements at Greater Latrobe while attending Easter Westmoreland Career and Technology Center. In the home school district, basic and elective courses are offered. Additionally, the school district offers the following world languages at all levels from introductory to advanced placement: Spanish, French, and German.

At the secondary level, the school district supports advanced placement (AP) courses in social studies, mathematics, English, world languages, science, and music. Additionally, the fine and performing arts curricula provide students with an outstanding opportunity to participate in self-expression in a culturally enriched environment.

School / Community Partnerships

Several school and community partnerships provide students with rich and varied experiences, which extend beyond the normal school setting. Among the many partnerships are the following:

- * Chamber of Commerce
 - Nine economic understanding programs
 - Three business education programs

- * Career Fairs
 - A variety of occupations at this December event held in the CSC
 - Monthly working lunches

- * McFeely Rogers Foundation
 - Enrichment opportunities in fine and performing arts
 - Visits to theaters and museums

- * Partnership Programs
 - Allied Health
 - Technology (CISCO)
 - Kennametal Young Engineers Program

- *Dual Enrollment Programs
 - Westmoreland Community College
 - St. Vincent College
 - Mount Aloysius College
 - Penn Highlands Community College
 - Seton Hill University

STUDENT COURSE SELECTION INFORMATION

This course selection material is provided to assist students and their parents with the task of selecting courses for the **2014-2015 school year**. It is essential for students and parents to acquaint themselves with the contents of this **Program of Studies** booklet so that knowledgeable decisions can be made about an individual student's course of study.

As you select courses, attention should be given to course requirements, entrance prerequisites, and course sequences. You should realistically assess your capabilities and ambitions. If you have any doubts or questions concerning a course, you are encouraged to discuss the course with the appropriate teacher or counselor. Counselors have been assigned the students alphabetically.

Guidance Counselor:

Mrs. Susan Kuhn
Ms. Wendy Hager
Mr. Eric Burkley

Student's last name beginning with:

(A – Ha)
(He – Pas)
(Pat – Z)

The selection of courses will ultimately depend upon the student's abilities, the student's interests, and specific requirements of the college a student plans on attending or the program of study a student wishes to pursue upon graduation.

Colleges and employers are concerned with attendance records, the list of courses successfully completed and the quality of work completed in each course.

We recommend that students expecting to pursue a college degree or post secondary training in technical fields of study take courses in language arts, mathematics, laboratory sciences, and world languages in 10th, 11th, and 12th grade. Students can only schedule one study hall per day.

SCHEDULE CHANGES

The courses you select reflect a combination of required and elective courses. Any request or changes must be made by April 11, 2014. After scheduling, if grades have dropped necessitating a change or you have "changed your mind," schedule change requests will be accepted until the cutoff date.

Schedule changes requested after April 11, 2014 will be limited to the following categories. The Add/Drop Committee must approve these requests next fall:

- A student fails a subject and must repeat that subject the next year.
- Schedule conflicts occur or errors made by the school during the scheduling process.
- Students register for a sequential course during the scheduling process and then perform poorly during the remainder of the school year
- A student's desire to drop a study hall to add an open elective course offering.
- Students are enrolled in a work-study program (grade 12) that necessitates scheduling changes due to their work schedule
- Students are scheduled to repeat a course with a teacher with whom they have previously failed a class.

GRADUATION CREDIT REQUIREMENTS
(Grade 9 – 10 – 11 – 12)

<u>SUBJECT</u>	<u>CREDITS</u>
English	4
Mathematics	3 (Algebra I and Geometry are required)
Science	3 (A course in Biology is required) a minimum of 3 courses
Social Studies	4
Physical Education	1.25
Health	.75
Art/FACS/Tech Ed/Music	2
Electives	6
Total	<u>24 credits</u>

SPECIAL NOTE: All students who graduate Greater Latrobe Senior High School are required to complete a graduation project.

Greater Latrobe Senior High School
Graduation Requirements
Grades 10 – 11 – 12

I. Social Studies Requirements -

Grade 10	U.S. History
Grade 11	Global Studies
Grade 12	Credit elective from the Social Studies program

II. Arts – one credit required – Select from art, music, family and consumer science, technology education.

III. Two semesters of physical education and one semester of health are required.

IV. Every senior must schedule and pass one (1) credit of English from the following list:

- | | |
|---|---------------------------------------|
| * Academic English IV | * Business Communications |
| * English IV | * Contemporary Literature |
| * AP English Literature and Composition | * AP English Language and Composition |

V. Algebra I and Geometry are required.

VI. Biology is required.

VII. Class Status:

- A. 24 credits are required to graduate
- B. To be considered a senior, for the year a student must have earned eighteen (18) credits.
- C. To be considered a junior, a student must have earned at least twelve (12) credits.
- D. To be considered a sophomore, a student must have earned at least five (5) credits.

Greater Latrobe Senior High School
Honor Roll Requirements

To be considered for Honor Roll status, students must take five (5) courses or a total of five (5) credits. None of the five (5) courses can be a Pass/Fail course. Courses that are taken for Pass/Fail grades are not considered for GPA (Grade Point Average), Class Rank, and Honor Roll.

Language Arts

LANGUAGE ARTS

STUDENTS ARE NOT PERMITTED TO ELECT A REQUIRED COURSE THAT IS A LOWER LEVEL COURSE THAN PASSED IN PREVIOUS YEARS.

To enrich the program in English, Greater Latrobe Senior High School offers a number of electives from which the student may choose following certain regulations established by the school to insure that a student's total education is sound.

1. To meet the requirements for graduation from Greater Latrobe Senior High School each student must successfully complete enough courses to total four (4) credits of English.
2. Every student must take either English II or Academic English II during the sophomore year and English III, Academic English III, or AP Language and Composition during the junior year. In addition, any other course open to grade ten and grade eleven students may be elected.
3. Every senior must schedule and pass one (1) credit of English from the following list:
AP English Language & Composition, AP English Literature & Composition, Academic English IV English IV, Contemporary Literature, and Business Communications.

<u>ENGLISH II</u> (110)	Credit: 1	Open to Grade(s): 10
Prerequisite: 9 th Grade English	Meets: M-F (Year)	Quality Points: Standard

This is a course required for tenth grade students except those selecting Academic English II. The primary emphasis will be on the use of reading strategies to improve reading comprehension and on the writing process to improve written communication. An additional emphasis will be on preparation for the Pennsylvania Keystone Literature Exam, a state required end-of-course exam. The literature studied will include short stories, novels, poetry and literary nonfiction. There will also be emphasis on research and public speaking skills.

<u>ACADEMIC ENGLISH II</u> (100)	Credit: 1	Open to Grade(s): 10
Prerequisite: 9 th Grade English	Meets: M-F (Year)	Quality Points: Standard

This is a course required for all tenth grade students except those selecting English II. Academic English II is an academically challenging class with an emphasis on various literary types: novel, drama, poetry, short story, and literary nonfiction. The development of writing skills, with an emphasis on composition, will be integrated with the study of literature whenever possible. Vocabulary study and oral communication will supplement the reading and writing portions of the course.

<u>ENGLISH III</u> (130)	Credit: 1	Open to Grade(s): 11
Prerequisite: English II	Meets: M-F (Year)	Quality Points: Standard

This course for eleventh grade students continues emphasis on improving the basic skills in reading and writing. In addition, the course will emphasize the interpretation and analysis of fiction and non-fiction texts in preparation for the Pennsylvania Keystone Literature Exam, especially for those students who did not pass this state-required end-of-course exam in their sophomore year. The course will cover literature that varies in type and theme. Emphasis is also on growth in vocabulary, research skills, and public speaking.

ACADEMIC ENGLISH III (120)

Prerequisite: English II or Academic English II

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 11

Quality Points: Standard

This academically challenging course is open to eleventh graders. It is a survey of American literature from the 19th through 21st centuries with an emphasis on poetry, novel, and drama. Simultaneously, the course aims to develop composition skills through assignments such as the persuasive/argumentative essay and the literary analysis essay. In addition, vocabulary and speech skills are developed through activities related to the study of literature and composition.

ENGLISH IV (150)

Prerequisite: English III

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 12

Quality Points: Standard

This is a course open to twelfth grade students fulfilling the English graduation requirement. Selections from British and world literature are explored through different literary forms such as short story, novel, drama, and literary nonfiction. Many selections and units have valid, real life connections. Basic skills in reading, writing, speaking, and listening will be reviewed and practiced. Vocabulary development will be integrated with the study of literature.

ACADEMIC ENGLISH IV (140)

Prerequisite: English III or Academic English III

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 12

Quality Points: Standard

This academically challenging course is open for election by twelfth grade students fulfilling the English graduation requirement. The literature in the course will stress English writers and will consist of short stories, plays, novels, and poems. Various writing assignments and the research paper will serve to develop the techniques of multi-paragraph writing and prepare students for writing at the college level. In addition to literature and writing, the course will emphasize the growth of vocabulary and speaking skills.

CONTEMPORARY LITERATURE (090)

Prerequisite: None

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 10-12

Quality Points: Standard

This is a full-year course "strongly recommended" for those planning to take AP English courses. It is open to students in grades ten, eleven, and twelve who particularly like to read literature. This is a course open for election by senior students to meet the English graduation requirement. Throughout the year students will explore multiple themes such as responsibility, decision-making, prejudice, crime, teenage-adult relationships, and accepting differences in others through an examination of modern and postmodern fiction. A variety of activities, such as group work, discussion, library research, and written compositions will be used to explore each text.

AP ENGLISH LITERATURE AND COMPOSITION (190)

Prerequisite: Academic English III or AP Language

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 12

Quality Points: A=5.0, B=4.0, C=3.0

Advanced Placement English Literature and Composition is for twelfth graders who desire an academically challenging English course that offers intensive preparation for college English. The course is designed to "engage students in the careful, critical reading and analysis of imaginative literature" (as detailed in the *AP English Course Description*) and to develop their ability to compose expository, analytical, and argumentative texts. Students will complete both formal and informal papers of various lengths. At least one of these documents will be a formal research project. All course content aims at preparing students for the rigor of college-level study as measured by the College Board Advanced Placement Exam in Literature and Composition given in May for a fee. An acceptable score on this test and/or a comparable test given to the student by the college he/she is entering may determine whether that student receives college credit, advanced placement in college English, or both. It is the equivalent of a college-level freshman literature course. AP Language and Composition, Contemporary Literature, and/or Composition are strongly recommended as preparation for this class.

During the summer, students will be required to complete a reading and writing assignment in preparation for first quarter course work.

AP ENGLISH LANGUAGE AND COMPOSITION (191)

Prerequisite: Academic English II or III

Credit: 1

Meets M-F (Year)

Open to Grades(s): 11& 12

Quality Points: A=5.0,B=4.0,C=3.0

Advanced Placement Language and Composition is a course for eleventh or twelfth graders who desire an academically challenging English course. This writing course is designed to improve and develop a student's ability to compose and analyze discourse in each of the rhetorical modes. In addition to refining their formal written expression, students will also learn how to interpret visual texts. Reading for the course will include a wide variety of mostly non-fiction from both past and contemporary authors/writers. While literature is not a primary focus, some fiction will provide a means for exploring rhetorical techniques and stylistic elements students will be asked to both analyze and model. Students will complete both formal and informal papers of various lengths. At least one of these documents will be a formal research project. This course offers intensive preparation for college English and is the equivalent of a freshmen composition course (a course required of practically all major fields of study.) As such, it offers practice for a standardized Advanced Placement English Language test of the College Entrance Examination Board, administered in May for a fee. An acceptable score on this test and/or a comparable test given to the students by the college he/she is entering may determine whether that student receives college credit, advanced placement in college English, or both. The elective course, Composition, and strong performance as demonstrated through high grades in prior English classes are strongly recommended.

During the summer, students will be expected to complete multiple reading and writing assignments in preparation for the first quarter course work.

FILM MEDIA (095/096)

Prerequisite: None

Credit: ½

Meets: M-F

Open to Grade(s): 10-12

Quality Points: Standard

This is a one-semester course open to election by students in the tenth, eleventh, and twelfth grade. Students will gain an understanding of how films are produced both technically and artistically. Units of study include basic cinematography, rhythm editing, visual composition, film history, and screenwriting. Full-length, short, and animated films from the early beginnings of cinema to the present day will reinforce concepts in each unit of study. The examination of each film will serve as a means to evaluate its overall technique and cultural significance.

THEATER ARTS I (145/146)

Prerequisite: None

Credit: ½

Meets: M-F

Open to Grade(s): 10-12

Quality Points: Standard

This semester-long, writing intensive course is open to all students and will provide students with an overview of theater history, theater methods, and stage craft techniques. Students will be exposed to all aspects of the theater arts. Class activities will not be based solely on acting and performance. Through research-based, hands-on, and performance projects students will gain an understanding of theater as an art form.

BUSINESS COMMUNICATIONS (160)

Prerequisite: English III or Academic English III

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 12

Quality Points: Standard

This is a course open for election by twelfth grade students fulfilling the English graduation requirement. This course is designed for the senior who intends to develop communication skills necessary to help obtain a career. Verbal, nonverbal and written communication skills are stressed. College level materials focus on technical writing, research writing, resumes, interviews, and public presentation. Special programs throughout the year feature business professional guest speakers, workshops, and simulated interviews. The course addresses the need to remain abreast of the demands of the corporate world to acquire the skills and knowledge necessary for success in a competitive environment. This course provides a variety of skills needed to make a student a desirable candidate for future business and professional positions.

MULTIMEDIA JOURNALISM I (101)

Prerequisite: None

Credit: 1
Meets: M-F (Year)Open to Grade(s): 10-12
Quality Points: Standard

This course emphasizes the skills and knowledge required to produce a newspaper and contributes to the production of the school's publications. Students will conduct interviews, write in a variety of journalistic forms, explore leadership positions, and help produce and edit the newspaper using desktop publishing. Students may also have opportunities to explore a variety of journalistic fields, such as writing for the web and broadcast journalism. Students will explore print, broadcast, and online journalism; layout design; photography; ethical decision-making; advertising; media literacy; and video planning and production. A combination and variety of classroom assessments and practical experience will allow the student to explore the evolving world of mass communication in a hands-on workshop environment while building real-life application skills in writing, communication and leadership. With a B average and a teacher recommendation, students can advance to one of the communication workshops: Video Production or Multimedia II.

MULTIMEDIA JOURNALISM II (202)

Prerequisite: Multimedia I or Broadcast I

Credit: 1
Meets: M-F (Year)Open to Grade(s): 11-12
Quality Points: Standard

Students in this advanced journalism course work to produce Greater Latrobe School District's publications, an online news source and the traditional print publication. This course will give students the opportunity to experience and apply the current trends and future of communication and journalism. Students will use modern technological tools, programs and industry-standard equipment in a hands-on product-driven workshop. The course incorporates extensive research skills; investigative reporting; expository, argumentative, and journalistic writing skills; the writing process; and problem solving techniques. Students work as a collaborative team to brainstorm ideas, discern newsworthy qualities, create content, design layouts, make photos maintain a working budget, and actually publish for an audience. In addition, the staff is comprised of students who have talents and interests in photography, art, broadcast and video production, and technology. Leadership, cooperation and high standards of achievement are essential.

BROADCAST AND PRODUCTION I (197)

Prerequisite: None

Credit: 1
Meets: M-F (Year)Open to Grade(s): 10-12
Quality Points: Standard

Broadcast and Video Production I exposes students to broadcasting and video production through a theory based, hands-on approach. Topics include the fundamental technical aspects of the digital video camera, camera shots and composition, media literacy, aesthetic elements and techniques, Sony Vegas non-linear editing, public service announcements, television advertising, short films, special effects, WCAT-TV studio roles and responsibilities and broadcast news. Students also have the opportunity to work in the TV Studio to produce a variety of programming. Students with an interest in all forms of broadcasting, communications, visual arts, journalism and video production are encouraged to take this class.

BROADCAST AND PRODUCTION II (198)

Prerequisite: Broadcast and Production I

Credit: 1
Meets: M-F (Year)Open to Grade(s): 11-12
Quality Points: Standard

This course builds upon the skills learned in Broadcast and Video Production I. Students will have the opportunity to experience the real world of television production in a quality, multi-camera production studio. Students are responsible for the production of the morning announcements and will produce a variety of programming distributed to the student body and local community. Students will further develop their digital nonlinear editing skills through the Sony Vegas and Final Cut editing programs. In addition, students will work on a variety of projects that expand their knowledge of broadcasting and video production. Projects include news packages, commercials, music videos, short films, montages, claymation, team highlight films, documentaries, music and graphic creation and the senior video. Students also have the opportunity to submit work to numerous video competitions and serve as members of the press at a variety of school and public events.

INTRODUCTION TO VIDEO PRODUCTION (193/192)

Prerequisite: None

Credit: ½

Meets: M-F (Year)

Open to Grade(s): 10-12

Quality Points: Standard

Introduction to Video Production provides an opportunity for students to explore video production in a theory based, hands-on approach. Topics include the basic aspects of the preproduction, production, and post-production process including storyboarding, script writing, directing, camera techniques, non-linear editing utilizing Sony Vegas software and creating special effects. The class is open to any student interested in communications, visual arts, public relations, acting, or technical production. (Pending School Board approval)

MULTIMEDIA JOURNALISM II (202)

Prerequisite: Multimedia I or Broadcast I

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 11-12

Quality Points: Standard

Students in this advanced journalism course work to produce Greater Latrobe School District's publications, an online news source and the traditional print publication. This course will give students the opportunity to experience and apply the current trends and future of communication and journalism. Students will use modern technological tools, programs and industry-standard equipment in a hands-on product-driven workshop. The course incorporates extensive research skills; investigative reporting; expository, argumentative, and journalistic writing skills; the writing process; and problem solving techniques. Students work as a collaborative team to brainstorm ideas, discern newsworthy qualities, create content, design layouts, make photos maintain a working budget, and actually publish for an audience. In addition, the staff is comprised of students who have talents and interests in photography, art, broadcast and video production, and technology. Leadership, cooperation and high standards of achievement are essential.

COMPOSITION (136)

Prerequisite: None

Credit: ½

Meets: M-F

Open to Grade(s): 10--12

Quality Points: Standard

This is a one-semester course "strongly recommended" for those planning to take AP English courses in the junior and senior year. It is open for election by tenth, eleventh, and twelfth grade students. The major emphasis in this course is on both the single paragraph and the multi-paragraph expository paper. In the first half of the course the single paragraph paper serves to develop basic writing skills such as the topic sentence, specific and concrete details, methods of organization, and sentence structure. In the second half of the course the informative paper, the argumentative paper, the critical paper, and creative writing serve to develop the techniques of multi-paragraph writing.

PRE-COLLEGE READING AND TEST PREPARATION (089/ 094)

Prerequisite: None

Credit: ½

Meets: M-F (Fall)

Open to Grade(s): 10 -11

Quality Points: Standard

Pre-College Reading and Test Preparation, unlike the yearlong grade level English class, is designed to target specific skills necessary for navigating a variety of subject matter texts. This course provides students with an opportunity to improve their abilities comprehending, analyzing, and interpreting mostly non-fiction texts of the type the student is likely to encounter in college courses. Course material will be geared to the specific needs of the students and include both short works, such as journal and magazine articles, personal narratives, professional essays, multi-media documents, as well as longer expository works taken from history, science, sociology, and psychology. While fiction will not be a focus, students who need assistance in improving their ability to interpret and analyze fictional passages will encounter works from a variety of genres including the short story, novel, and/or poetry. In order to prepare for a wide-range of college entrance exams and state assessments such as ACT, PSAT, SAT, and Keystone Exams, the course will provide many opportunities to improve test-taking strategies, practice certain types of questions, and increase proficiency at timed writing. This course is highly recommend for students who are struggling with or would like to improve their ability to comprehend more demanding texts, tackle challenging written exams, and bolster study skills.

Mathematics

MATHEMATICS DEPARTMENT

STUDENTS MUST SELECT A COURSE THAT IS A HIGHER LEVEL OF MATHEMATICS THAN COURSES PASSED IN PREVIOUS YEARS

1. To meet the requirements for graduation from Greater Latrobe Senior High School every student must earn at least three credits in mathematics.
2. Every student must complete at a minimum algebra I and geometry.
3. The typical course sequence to complete algebra and geometry is algebra I, geometry, and algebra II.
4. Students typically complete their algebra I requirement by taking a two-year course sequence, algebra IA and algebra IB.

ALGEBRA IB (235P)
Prerequisite: Algebra IA

Credit 1.5
Meets: M-F (Year)
Every other day lab period

Open to Grade(s): 10
Quality Points: Standard

Emphasis will be placed on algebraic language, structure, concepts and skills. Major topics include function concept and representations, linear functions and equations, solving and graphing linear inequalities, linear regression and modeling, systems of linear equations and inequalities, exponents and exponential functions, quadratic equations and functions, polynomials and factoring, statistics, and probability. This course emphasizes "Learning by Doing", where the student is an active mathematician.

GEOMETRY (217)
Prerequisite: Algebra IB,
or Academic Algebra IB

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This is a basic course combining plane and introductory solid geometry in an informal approach. The course aim is to develop reasoning, a familiarity with geometric concepts, and an understanding of practical applications of geometry. The course is intended for pupils who wish to pursue a vocational or technical career in the future or who primarily wish to obtain a general knowledge of the basic concepts of geometry.

ACADEMIC GEOMETRY (210)
Prerequisite: C or better in Academic Algebra IB

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-11
Quality Points: Standard

This is a challenging course for the college-bound student involving concepts of plane and solid geometry. The main course objective is to introduce students to logical thinking and to more creative mathematics. The intuitive ideas of point, line, and plane are developed into major geometric concepts including (but not limited to) angles, segments, polygons, circles, area, surface area, volume, and proofs. Emphasis will be on applying geometric concepts to problem solving.

ALGEBRA II (219)
Prerequisite: C or better in Algebra IB
or Academic Algebra IB and Geometry

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 11-12
Quality Points: Standard

This is a basic course designed to extend the principles of first year algebra in a slow developmental study of the structure of the system of real numbers and of solving open sentences over the real number domain. Course topics include: equations and inequalities, solving practical statement problems when appropriate, polynomials and factoring, graphing of linear and quadratic relations, radical expressions, and complex numbers. Geometry, probability, and data analysis topics are also incorporated.

ACADEMIC ALGEBRA II (220)

Prerequisite: C or better in Academic Algebra I or Academic Algebra IB and Academic Geometry

Credit: 1
Meets: M-F (Year)Open to Grade(s): 10-12
Quality Points: Standard

This is a challenging course involving a thorough and extensive treatment of the basic concepts of second year algebra based on an extension of concepts previously studied in Algebra I. The course is a continuation of skills learned in Algebra I or IA / IB and focuses on solving and graphing equations, inequalities, and systems; solving statement problems showing practical application of algebra; polynomials and factoring; linear and quadratic relations and functions; exponential and logarithmic functions; and complex numbers. Geometry, probability, and data analysis topics are also incorporated.

TRIGONOMETRY (255/256)

Prerequisite: Algebra II and Geometry

Credit: ½
Meets: M-F (Semester)Open to Grade(s): 11-12
Quality Points: Standard

This is a one-semester course offered to provide a practical background in trigonometry concepts for the vocational student, or the student who does not intend to pursue any academic mathematics in post-high school training. The concepts of functions, graphs of functions, right triangle trigonometry, and practical trigonometry usage are emphasized.

PROBABILITY AND STATISTICS (295/296)

Prerequisite: C or better in Algebra II

Credit: ½
Meets: M-F (Semester)Open to Grade(s): 11-12
Quality Points: Standard

This is a one-semester course accommodating students from multiple levels of ability. Students in this course use calculators and computer software to investigate and apply concepts in probability and statistics. Students apply what they learn by completing several group projects. This course is recommended for college-bound students.

PRECALCULUS (272)

Prerequisite: C or better in Academic Algebra II and in Academic Geometry with teacher recommendation

Credit: 1
Meets: M-F (Year)Open to Grade(s): 10-12
Quality Points: Standard

This is a rigorous course of students who are preparing to take high school or college calculus. The course begins with a thorough review of algebra II and moves on to examine the behavior of functions using multiple perspectives: graphically, numerically, and algebraically. The graphs of functions are studied in depth including inverses, transformations, and compositions. Particular attention is devoted to linear, quadratic, polynomial, rational, trigonometric, exponential, and logarithmic functions and their graphs. Emphasis is placed on the use of classroom graphing technology and real-world applications.

INTRODUCTION TO CALCULUS (267)

Prerequisite: B or better in Academic Algebra II with a teacher recommendation

Credit: 1
Meets: M-F (Year)Open to Grade(s): 10-12
Quality Points: Standard

The pre-calculus topics include a review of the elementary functions as well as advanced properties of functions. Special attention will be given to polynomial functions, rational functions, logarithmic functions, exponential functions, and trigonometric functions. Additional topics include complex numbers and analytic geometry. The course will also include topics essential to calculus such as polar coordinates, parametric equations, and an introduction to limits and continuity, sequences and series, and derivatives. This course is offered to those students who have excelled in Academic Algebra II. Students must have the ability to perform in a more rigorous, accelerated program and be able to manage an advanced level of problem-solving, a greater depth of application, and a faster pace. Students will spend more time on exploration and enrichment topics that may include additional writing assignments. A consistent, positive work ethic and the ability to work independently are necessary skills for successful completion of this advanced level course. A required **graded** summer assignment of Algebra II topics must be completed **prior** to beginning the course. Three optional summer tutoring sessions will be given to aid in the completion of the summer assignment. A TI-Nspire CX (CAS version) graphics calculator will be used throughout the course. This course is a prerequisite for AP Calculus BC.

CALCULUS (269)

Prerequisite: C or better in Precalculus

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 12

Quality Points: Standard

This is a demanding, full year course for students who wish to pursue additional mathematics courses in college. The course stresses theory as well as operations and application.

The first semester focuses on differential calculus and includes such topics as limit of a function, continuity, the derivative, tangent to a curve, rates of change, chain rule, implicit differentiation, higher derivatives, graphing, and related rates and optimization problems. The second semester concentrates on integral calculus and such topics as anti-derivatives, definite integral, fundamental theorem of calculus, and areas under curves.

ADVANCED PLACEMENT CALCULUS AB (268)

Prerequisite: Recommended B or better in Precalculus

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 11-12

Quality Points: A=5.0, B=4.0, C=3.0

The student completes the course curriculum as defined by College Board for Advanced Placement Calculus AB. This course is equivalent to college freshman calculus, offering practice for a standardized Advanced Placement Calculus exam developed by College Board and administered in May for a fee. The student is strongly encouraged to take the AP exam. An acceptable score on this exam and/or a comparable test given to the students by the college he/she is entering may determine whether the student receives college credit, advanced placement in calculus, or both.

The first semester topics include functions, limits, differentiation, continuity and applications of differentiation such as curve sketching and related rates and optimization problems. The second semester topics include integration, finding area and volume, differential equations, slope fields, and rectilinear motion.

Students should have a strong ability and excellent past performance in mathematics as well as the time and ability to cope with accelerated learning. Students are expected to complete an assigned set of review problems covering topics from advanced algebra, trigonometry, and analytical geometry during the summer *prior* to beginning the course.

ADVANCED PLACEMENT CALCULUS BC (274)

Prerequisite: Recommended B or better in Advanced Placement Calculus AB

Credit: 1/2

Meets: Every other day (Year)

Open to Grade(s): 12

Quality Points: A=5.0, B=4.0, C=3.0

This course is designed for those students who have already completed Advanced Placement Calculus AB and is based on the curriculum defined by College Board. After successful completion of this course and an acceptable score on the AP exam administered in May for a fee, the student will have learned the material equivalent to the first two semesters of college calculus and is eligible to receive college credits for two college calculus courses, advanced placement in calculus, or both. The student is strongly encouraged to take the AP exam

Topics to be covered include parametric, polar, and vector functions and their derivatives and integrals; Euler's Method; L'Hopital's Rule; antidifferentiation by parts and simple partial fractions; improper integrals; logistic differential equations; and polynomial approximations and series including series of constants and Taylor series. Concepts learned in AP Calculus AB will also be reviewed and analyzed further.

ADVANCED PLACEMENT CALCULUS BC (275) Credit: 1 Open to Grade(s): 12
Prerequisite: Recommended B or better in Meets: M-F (Year) Quality Points: A=5.0, B=4.0, C=3.0
Introduction to Calculus

This course is designed for those students who have already completed Introduction to Calculus. The student completes the course curriculum as defined by College Board for Advanced Placement Calculus BC. This course is equivalent to the first two semesters of college calculus, offering practice for the standardized Advanced Placement Calculus exam developed by College Board and administered in May for a fee. After successful completion of this course and an acceptable score on the AP exam, the student will have learned the material equivalent to the first two semesters of college calculus and is eligible to receive college credits, advanced placement in calculus, or both. The student is strongly encouraged to take the AP exam.

The first semester topics include a review of limits, differentiation, and continuity; applications of differentiation such as curve sketching and related rates and optimization problems; L'Hopital's Rule; integration; applications of integration (area and volume problems); and motion problems. The second semester topics include differential equations; slope fields; Euler's Method; parametric, polar, and vector functions and their derivatives and integrals; and polynomial approximations and series including series of constants and Taylor Series.

ADVANCED PLACEMENT STATISTICS (254) Credit: 1 Open to Grade(s): 11-12
Prerequisite: C or better in Precalculus Meets: M-F (Year) Quality Points: A=5.0, B=4.0, C=3.0
or Introduction to Calculus

This course is designed for students to learn college-level statistics. The course is divided into four broad topics: Exploratory Data Analysis, Planning and Conducting a Study, Probability, and Statistical Inference. This course incorporates several projects, including technology integration, into these topics of study. All of these topics are included on the Advanced Placement Statistics exam developed by the College Examination Board and administered in May for a fee. An acceptable score on this exam and/or a comparable test given to the students by the college he/she is entering determines whether the student receives college credit, advanced placement in statistics, or both.

ADVANCED CALCULUS CONCEPTS (271) Credit: 1 Open to Grade: 12
Prerequisite: AP Calculus BC Meets M-F Quality Points: Standard

Students who have successfully completed AP Calculus BC and enroll in this course for both semesters will be given the opportunity to enrich and broaden the mathematics they have already learned, including topics in algebra, trigonometry, conics, and calculus, while also expanding their knowledge of topics typically covered in a college-level Calculus III and/or IV course including multi-variables, differential equations, modeling, and applications.

YOUNG ENGINEERS PROGRAM (955/956) Credits: ½ Open to Grades: 11-12
Prerequisite: Academic Algebra II Meets: M-F (Semester) Quality Points: Standard

This program provides students with information and experiences to better understand and be more prepared for engineering careers. The students attend lectures taught by Kennametal employees (Innovators) and participate in projects and field trips at Kennametal twice weekly for fifteen weeks to learn more about engineering and the manufacturing process within a real-world setting. During the class time at the high school, students research various engineering careers, participate in projects, and develop career skills such as public speaking.

Students are responsible for finding their own transportation to Kennametal's Technology Center and must be available Tuesday's and Thursday's for an additional class period after the end of the normal school day, in addition to the daily scheduled class time the last period of the day. Students are expected to have a strong foundation and interest in science and mathematics.

INTRODUCTION TO COMPUTER PROGRAMMING (XXX) Credit: 1
Prerequisite: Geometry Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course is an introductory course for learning computer programming in an animated environment. Students will acquire valuable problem solving skills while also learning to program computers to produce an animated 3D world. Although students will be learning about computer programming, this course should not be confused with a programming language course. This class does, however, explore the same terminology and should be considered an introductory course to the concepts taught in the AP Computer Science A course which teaches programming in the JAVA language.

This is a great course for those students interested in computer programming, gaming, or animation. Following up this course with the AP Computer Science A course would prepare a student well for careers in computer science or information technology.

ADVANCED PLACEMENT COMPUTER SCIENCE (273) Credit: 1
Prerequisite: Recommended B or better in
Pre-Calculus or Introduction to Calculus or
a grade of A or B in Academic Algebra II
with teacher recommendation Meets: M-F

Open to Grades: 10-12
Quality Points: A=5.0,B=4.0,C=3.0

This course is designed as an introductory college level computer science course. It focuses on developing the skills and understanding of computer programming to solve problems. Students design useful computer programs while also learning the fundamentals of data structures, standard algorithms, and typical programming applications. Basic understanding of both the hardware and software components of computer systems and responsible use of these components are included. All programming is done using Java; however no prior knowledge of programming is necessary prior to taking this course, students must have a solid foundation in algebra, problem solving, and mathematical reasoning.

This course is equivalent to a college introductory computer science course, offering practice for a standardized Advanced Placement Computer Science test developed by the College Examination Board and administered in May for a fee. An acceptable score on this test and/or a comparable test given to the students by the college he/she is entering may determine whether the student receives college credit, advanced placement in computer science, or both.

Science

SCIENCE DEPARTMENT

BIOLOGY (329)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

Biology is a career – oriented course that is geared for the student who not interested in a four-year post secondary education. The course focuses on a conceptual presentation that explains Biology and gives students a sense of themselves as being a part of life's tapestry, not apart from it. Through a combination of class discussions and hands-on activities, students examine the world around them. This course provides students with a strong foundation in molecular and cellular Biology through the study of macromolecules and cell structure and function. This basic foundation is essential in understanding complex Key Concepts discussed later in the course. Concepts covered include genetics and inheritance; evolution and natural selection; and ecology. This course consistently relates biology to everyday existence and helps students realize the impact science has on their lives.

ACADEMIC BIOLOGY (319)
Prerequisite: C or better in
9th Grade Science

Credit: 1.5
Meets: M-F (Year)
Every other day for lab period

Open to Grade(s): 10-12
Quality Points: Standard

This laboratory course is a general study of biology. Topics covered include biochemistry, cell structure and function, cell division and reproduction, Mendelian and molecular genetics, taxonomy, evolution, and ecology. This course is designed for students preparing for college or other science-oriented students. This course has a prerequisite of a Grade of "C" or better in 9th Grade Science. The class is opened to students in Grades 10, 11, and 12.

ADVANCED PLACEMENT BIOLOGY (343)
Prerequisite: B or better in Academic Biology,
Biology 9, completed or taking Chemistry.
(Requirements can be evaluated on an individual basis.)

Credit: 1.5
Meets: M-F (Year)
Every other day for lab period

Open to Grade(s): 10-12
Quality Points: A=5.0, B=4.0, C=3.0

AP Biology is the equivalent of an introductory college biology course for biology majors. The course will integrate the topics of molecules and cells, heredity and evolution, and organisms and populations with recurring themes of structure/function relationships, energy transfer, regulation, continuity and change. The recommended laboratories include enzyme kinetics, Restriction Fragment Length Polymorphism (RFLP) analysis of viral DNA, and bacterial transformation with plasmid DNA. Additional topics and current research in biology will be discussed through student-generated PowerPoint presentations and web-based searches.

The student will complete the course curriculum as defined by The College Board. The course must be completed in approximately 160 school days to ensure review for the mid-May exam. The student will be strongly encouraged to take the AP exam.

It is strongly suggested that students be highly motivated for inquiry both in the laboratory and in the scientific literature and allow for an additional one to two hours per day outside the classroom for accelerated learning.

The course recommends a prerequisite of "B" or better in Academic Biology or Biology 9, and that the student has completed or is enrolled in Chemistry. This course is open to Grades 10, 11, and 12. It is weighted quality point course.

CHEMISTRY (327)

Credit: 1.5

Open to Grade(s): 10-12

Prerequisite: C or better in Academic Algebra I or IB and Academic Biology

Meets: M-F (Year)
Every other day for lab period

Quality Points: Standard

Chemistry is a full year laboratory course. This course covers the basic processes and mechanics of chemistry. Included in the areas covered are quantitative and qualitative analysis of various topics including the structure of the atom, chemical reactions, and the study of solutions and gases. These topics will be covered both in the laboratory and in the classroom. This course is designed to meet standard college entrance requirements.

ADVANCED PLACEMENT CHEMISTRY (347)

Credit: 1.5

Open to Grade(s): 11-12

Prerequisite: B or better in Chemistry, completed or taking Physics I.

Meets: M-F (Year)
Every other day for lab period

Quality Points: A=5.0, B=4.0, C=3.0

(Requirements can be evaluated on an individual basis.)

The course will follow the curriculum defined by The College Board AP Chemistry. It will include twenty-two recommended AP experiments along with additional computer based experiments. An additional unit on organic chemistry will also be included. The AP curriculum will be concluded in time to ensure review for the test in mid-May. The students will be strongly encouraged to take the AP Exam. This class requires a summer assignment to be completed prior to the beginning of the school year.

Because of the increased intensity of the course, students should allow an average of one or two hours of additional time per night to be successful. The course is designed for those students planning to continue studies beyond the high school level in engineering, scientific or medical fields.

PHYSICS I (340)

Credit: 1.5

Open to Grade(s): 11-12

Prerequisite: Recommended Chemistry, completed or concurrently taking Geometry

Meets: M-F (Year)
Every other day for lab period

Quality Points: Standard

(Requirements can be evaluated on an individual basis)

Physics 1 is a full year course that examines physical science concepts through a laboratory approach. This is first year physics course that introduces students to the broad concepts of mechanics, optics, electricity, and magnetism. Students will participate in problems solving, group laboratory activities, and presentation in order to gain an understanding of physics concepts. Additionally, students will utilize Data Studio software and Internet based activities throughout the year. Eleventh or twelfth grade student who has taken chemistry and geometry are eligible for this course.

ADVANCED PLACEMENT PHYSICS (344)

Credit: 1.5

Open to Grade(s): 12

Prerequisite: B or better in Physics I, completed or taking Calculus.

Meets: M-F (Year)
Every other day for lab period

Quality Points: A=5.0, B=4.0, C=3.0

(Requirements can be evaluated on an individual basis.)

The student will complete the course curriculum as defined by The College Board AP Physics B. This part of the course will be completed in time to ensure review for the test in early May. The student will be strongly encouraged to take the AP Exam.

The course will include Newtonian mechanics, thermodynamics, electricity and magnetism, waves and optics, quantum, and nuclear physics. Traditionally physics labs will be included. The course is designed for those students planning to continue studies beyond the high school level in engineering, science, and mathematics. Due to the course's increased intensity, the student should allow for additional time outside the classroom in order to be successful.

ANATOMY AND PHYSIOLOGY (337)

Credit: 1

Open to Grade(s): 10-12

Prerequisite: C or better in Biology

Meets: M-F (Year)

(Grade 10 & 11 if concurrent
with Chemistry/Physics)
Quality Points: Standard

This is a college level Anatomy & Physiology Class which class. Each unit involves a detailed look at an organ system. Lab activities involve microscope and microslide work, bone structure and identification, mammalian dissection of the cat, and muscle identification. Lab practicals will be given. Grading is weighted; tests 60%, labs 25%, projects 5% and quizzes 5%. A project on the heart is required during the third quarter.

ASTRONOMY (339)

Prerequisite: None

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 11-12
(Grade 11 if concurrent
with Chemistry/Physics)
Quality Points: Standard

Students study six major units: Early Astronomy; Earth, Moon and Sun Interactions; Telescopes, Spacecraft and Electromagnetic Spectrum; The Solar System; Cosmology & Astronomical Folklore. The planetarium is used to illustrate various astronomical principles in addition to viewing the constellations.

CAPSTONE COURSE (331)

Prerequisite: Referral by Guidance staff, review of applicants by Capstone Instructor, successfully completed Biology, Chemistry, Algebra II, Academic English, American History, and World Cultures

Credit: 1

Meets: M-F (Year)
Every other day for lab

Open to Grade(s): 12
Quality Points: Standard

A year long, field based, multi disciplinary science course that focuses upon the study of local, state, and world-wide environmental challenges. Water sampling and water testing are fundamental aspects of the course. In addition to the environmental science topics of pollution, loss of biodiversity, and resource depletion, the course will also include units on chemistry, biology, history, geography, and literature. The course culminates with the completion of a conservation project conceptualized, designed, and carried out by course participants.

EARTH AND THE ENVIRONMENT (317)

Prerequisite: Biology

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 11-12
Quality Points: Standard

This course is designed to introduce students to a broad base of environmental and ecological topics. The course includes the study ecosystems, biomes, resource depletion, biodiversity, pollution, renewable resources, and the importance of conservation and preservation of our local natural resources. Class participation will include a wide variety of hands-on lesson, labs, projects, and outdoor activities.

Social Studies

SOCIAL STUDIES DEPARTMENT

UNITED STATES HISTORY II (417)
Prerequisite: United States History I

Credit: 1
Meets: M-F (Year)

Open to Grade (s): 10
Quality Points: Standard

In this second half of United States History, students will examine their nation's history from the late 19th century to the present. Examples of topics of study are: American Foreign Policy, The World Wars, The Great Depression, The Cold War, American Economic History, The Vietnam Era, The Post Cold War World, and The Global Terror Threat. Classes will focus on cause/effect relationships, the reading and interpretation of primary resources, and the evaluation of America's role in various events.

AP UNITED STATES HISTORY (418)
Prerequisite: B or better in U.S. History II

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 11 - 12
Quality Points: A=5.0, B=4.0, C=3.0

The students will complete the course curriculum defined by The College Board AP United States History by mid-May and will be strongly encouraged to take the AP Exam. Historical topics covered will extend from discovery and settlement of the New World to the United States in the modern era (post 1974). In addition, the AP course will train students to analyze and interpret primary source material. Students will learn to take notes from both printed materials and lectures or discussions, write essay examinations, and write analytical and research papers. Students will be expected to express themselves with clarity and precision as well as know how to cite sources and credit the phrases and idea of others. This course is designed for those students who plan to continue studies beyond the high school level in history. Due to the increased intensity of the course, the students should allow for additional time outside the classroom in order to be successful. Student will be expected to complete a summer assignment.

**Students who have not taken US History II may also take an extended summer assignment that must be completed in addition to the regular summer requirements in order to fulfill the US History II prerequisite. Any ninth grade student applying to take the AP US History course must have all A's in English and Social Studies during their 9th grade year to be eligible.*

GLOBAL STUDIES (420)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 11
Quality Points: Standard

Students in this course will complete an in-depth study of selected culture areas in the western and non-western world. Areas of study will include, but are not limited to, China and East Asia, The Middle East, India, Central and South America and Russia. Emphasis will be placed on each region's culture, geography, current events, role in the global economy, and influence on American interests.

AP HUMAN GEOGRAPHY (419)
Prerequisite: US History II

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 11 - 12
Quality Points: A=5.0, B=4.0, C=3.0

Advanced Placement Human Geography is a college-level introductory course designed to study the patterns and processes of human activity on the earth's surface. Students will examine the events that have shaped human understanding, use and alteration of the physical landscape. The course will focus on the goals set forth by the AP guidelines, as students will use and think about maps and spatial data, understand and interpret the implications of associations among phenomena in places, recognize and interpret at different scales the relationships among patterns and processes, define regions and evaluate the regionalization process, and characterize and analyze changing interconnections among places. The students will employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences in preparation for the Advanced Placement Exam in Human Geography. The course will stress the need to relate theory to practice. The students will study the nature and perspectives of geography, population, cultural patterns and processes, the political organization of space, agricultural and rural land use, industrialization, economic development and urbanization across countries. Students should be prepared to analyze and interpret basic data relevant to Human Geography in an attempt to describe how our interactions with the environment affect how we live.

PSYCHOLOGY (437/438)
Prerequisite: None

Credit: ½
Meets: M-F (Fall/Spring)

Open to Grade(s): 11-12
Quality Points: Standard

Students in Psychology will examine how experiences influence the behavior of themselves, others and the broader society. It explores the inter-relationships of individuals and groups. Research projects and traditional testing are used for evaluation. Students selecting this class must be willing to read, take notes and participate in class activities and discussions.

EUROPEAN HISTORY (498)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 11-12
Quality Points: Standard

This course is a survey of western European history from the 14th century to the 18th century. Students will compare America's common history with Europe while obtaining a basic understanding of the modern European Union. Making use of the internet and other multimedia, students will be encouraged to experience history through performance-based and project-based activities. Students will develop skills in research, oral and written communications, problem solving, cooperation and creativity. Major areas of focus will include but are not restricted to Great Britain, France, Spain, Germany, Italy, Switzerland, Belgium, and the Netherlands.

CLASSICAL CIVILIZATION (442)
Prerequisite: None

Credit: ½
Meets: M-F (Spring)

Open to Grade(s): 11-12
Quality Points: Standard

Classical Civilization is a one-semester course in which students examine the advancement of early civilizations' religious lifestyles, governments, art and values. The course includes the civilizations of Greece and Rome.

GOVERNMENT (465)
Prerequisite: None

Credit: ½
Meets: M-F (Fall)

Open to Grade(s): 11-12
Quality Points: Standard

The government study deals with the operation of local, state, and national politics. Students examine the election process and their part in it, major offices in government, the Constitution, and the operation of the executive, legislative, and judicial branches.

ECONOMICS (486)
Prerequisite: None

Credit: ½
Meets: M-F (Spring)

Open to Grade(s): 11-12
Quality Points: Standard

This elective is open to all students interested in studying the principles of economics, a comparison of economic systems, and an application of basic skills to economic problems. In addition to an intensive study of American economic institutions, students will evaluate the increasing importance of globalization and global economic development.

LAW I (495/496)
Prerequisite: None

Credit: ½
Meets: M-F (Fall/Spring)

Open to Grade(s): 11-12
Quality Points: Standard

Law I helps students analyze the American justice system and ways to settle disputes. As students progress through the course, they will learn legal terminology, dispute methods, the American Court System (including steps in a trial and courtroom procedures/tactics), U.S. Landmark Supreme Court Cases, and Civil Law. Students have the opportunity to meet legal professionals and participate in simulations of the justice system. A participatory final exam, in the form of Mock Trial, may be given if deemed appropriate in that semester.

LAW II (494)

Prerequisite: Law I

Credit: ½

Meets: M-F (Spring)

Open to Grade(s): 11-12

Quality Points: Standard

Law II will be taught using the knowledge gained from the Law I course. Students will continue to analyze the American justice system in greater detail. Emphasis will be placed on specific areas of law, such as but not limited to; Consumer and Housing Laws (Contracts), Family Law, Juvenile Justice, and Criminal Law. Students will have the opportunity to examine criminal case studies, interact with legal professionals, and participate in simulations of the justice system according to material covered. A more in depth participatory final exam, in the form of a Criminal Mock Trial, may be given if deemed appropriate in that semester.

CURRENT ISSUES (475/476)

Prerequisite: None

Credit: ½

Meets: M-F (Fall/Spring)

Open to Grade(s): 11-12

Quality Points: Standard

The course consists of a study of current news, the mass media, and controversial issues of the day. Emphasis is placed not only on the issues but also on the effects that these issues have on the people of today, and how today's issues may affect the future. Class activities include large and small group discussions and debates, and individual and group research projects.

THE VIETNAM ERA (477/478)

Prerequisite: U.S. History 417

Credit ½

Meets: M-F (Fall/Spring)

Open to Grade(s): 11-12

Quality Points: Standard

This elective course is designed for students entering their junior or senior year of high school. Due to the intense nature of the work involved with the course, students choosing this elective must have completed United States History as a sophomore with at least a C+ grade. Students start their "Tour of Duty" with background about the Vietnamese people, their country and the nationalist movement led by Ho Chi Minh. While focusing on the main topics of the course, students will take time to consider the overall impact of the war. Students will have the opportunity to meet veterans of the war. All students will be expected to read David Maraniss' *They Marched into Sunlight*. This course will leave a lasting personal and educational imprint on each participant.

World Languages

WORLD LANGUAGES DEPARTMENT

FRENCH I (510)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course develops the four basic language skills: listening comprehension, speaking, reading, and writing through audio-lingual practice and question and answer drills, with attention to grammar and composition and concentration on developing good speech habits through proper introduction to the sound system and intonation patterns. Emphasis is placed on oral proficiency development.

FRENCH II (517)
Prerequisite: C or better in French I
or Teacher Recommendation

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course is intended to reinforce the material learned in French I. In addition, students will further develop their reading, writing, and speaking skills as a result of increased knowledge of vocabulary, grammar and sentence structures. Emphasis is placed on oral proficiency development.

FRENCH III (519)
Prerequisite: C or better in French II
or Teacher Recommendation

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course concentrates on advanced grammar and presentational skills. It includes stories read or discussed in class and paragraphs on a reading assignment or grammatical structure. Emphasis is placed on mastering the basics while building vocabulary and grammar to advance communication skills. Emphasis is placed on oral and written communication.

FRENCH IV (577)
Prerequisite: C or better in French III
or Teacher Recommendation

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 11-12
Quality Points: Standard

This course elevates the importance of reading and listening while maintaining competency in writing and speaking. Functional grammatical analysis is refined through precise drills and patterned practices. Literary selections of varying styles and content are studied. Students will be able to write original paragraphs in French on topics discussed in class as well as on related topics. As in all levels, oral proficiency is of prime importance.

ADVANCED PLACEMENT FRENCH (571)
Prerequisite: C or better in
French IV/Selection

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 12
Quality Points: A=5.0, B=4.0, C=3.0

This course is available to students who have successfully completed the four preceding levels of French. The emphasis of this course is preparation for the standardized Advanced Placement test administered in May. Instructional content will reflect materials, which would be covered in the fifth and sixth semesters of study at the college level. Speaking, reading, writing, and listening skills will be developed in great depth using a variety of video/audio, online newspapers/magazines, and other current issues. Much emphasis is placed on oral and written communication in preparation for college level French competency.

SPANISH I (520)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course develops the four basic language skills: listening comprehension, speaking, reading, and writing through audio-lingual practice and question and answer drills with emphasis on basic grammar structure and building vocabulary. Students will be introduced to the sound system of the language and will begin communicating at a basic level.

SPANISH II (527)
Prerequisite: C or better in Spanish I
or Teacher Recommendation

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course is designed to strengthen listening, reading, writing, and speaking skills by continuing the traditional approach with increased emphasis on grammatical construction and cultural background. It includes short skits and other activities supporting the development of listening and speaking skills in the target language as well as contributing to vocabulary gain.

SPANISH III (529)
Prerequisite: C or better in Spanish II
or Teacher Recommendation

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course is designed to work on vocabulary building and verb tenses with stress on active vocabulary and verb conjugation. Mastery of grammatical structures through oral and written exercises as well as continued development of listening and speaking skills are reinforced. Cultural background on many Spanish speaking countries is incorporated with the lessons.

SPANISH IV (579)
Prerequisite: C or better in Spanish III
or Teacher Recommendation

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 11-12
Quality Points: Standard

This course has an emphasis on reading and writing skills, especially the reading of literary selections from contemporary authors. Included are units on Spanish history and culture, as well as continuous practice on contemporary usage in composition and conversation.

ADVANCED PLACEMENT SPANISH (572)
Prerequisite: C or better in
Spanish IV/Selection

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 12
Quality Points: A=5.0, B=4.0, C=3.0

This course is available to students who successfully completed the four preceding levels of Spanish. The emphasis of this course is preparation for the standardized Advanced Placement test administered in May. Instructional content will reflect materials, which would be covered in the fifth and sixth semesters of study at the college level. Speaking, reading, writing, and listening skills will be developed in great depth using a variety of video/audio sources, online and audio newspapers/magazines, literature, music, as well as grammar resource books. An acceptable score on the Advanced Placement test and/or a comparable test administered by various colleges may determine whether that student will receive college credit (3-12 credits), advanced standing in Spanish or both.

GERMAN I (530)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course develops competence in understanding and speaking German within a restricted area of vocabulary. Introduction of speech patterns and some memorization of basic dialogues, along with the introduction of culture, make up most of the classes. Basic grammar patterns are covered. German readings are used for comprehension in German without English translation. Students will also prepare short, original dialogues demonstrating their oral-aural proficiency.

GERMAN II (537) Prerequisite: C or better in German I or Teacher Recommendation	Credit: 1 Meets: M-F (Year)	Open to Grade(s): 10-12 Quality Points: Standard
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This course continues the development of listening and speaking proficiency in German, with increasing emphasis on reading and writing proficiency. Vocabulary is expanded through controlled exposure to materials of both cultural and entertaining value, such as filmstrip, tapes, and booklets. Grammar for more complex sentence structure is introduced and drilled, both orally and in written form.

GERMAN III (539) Prerequisite: C or better in German II or Teacher Recommendation	Credit: 1 Meets: M-F (Year)	Open to Grade(s): 10-12 Quality Points: Standard
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This course continues to build listening and speaking proficiency in dialogue and narrative form. Increased emphasis is placed on reading and writing proficiency. New German vocabulary is introduced and subsequently reinforced through discussion of supplemental readings. Students also study modern culture and geography of German-speaking countries in more depth.

GERMAN IV (580) Prerequisite: C or better in German III or Teacher Recommendation	Credit: 1 Meets: M-F (Year)	Open to Grade(s): 11-12 Quality Points: Standard
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This course emphasizes proficiency in reading and writing in German while maintaining competency with listening and speaking. Advanced grammatical structures are introduced and reinforced through exercises. Students will read biographies of famous Germans, study German history, write original paragraphs and prepare oral presentations in German.

ADVANCED PLACEMENT GERMAN (574) Prerequisite: C or better in German IV/Selection	Credit: 1 Meets: M-F (Year)	Open to Grade(s): 12 Quality Points: A=5.0, B=4.0, C=3.0
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This course is available to students who have successfully completed the four preceding levels of German. The emphasis of this course is preparation for the standardized Advanced Placement test administered in May. Instructional content will reflect materials, which would be covered in the fifth and sixth semesters of study at the college level. Speaking, reading, writing, and listening skills be developed in great depth using a variety of video/audio tapes, newspapers/magazines, literature, anthologies as well as grammar resource books. An acceptable score on the Advanced Placement test and/or comparable test administered by various colleges may determine whether that student will receive college credit, advanced standing in German or both.

Business & Information Technology

BUSINESS AND INFORMATION TECHNOLOGY DEPARTMENT

ACCOUNTING I (629)

Prerequisite: None

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 10-12

Quality Points: Standard

Accounting I provides students with an understanding of the accounting cycle as it relates to sole proprietorships and corporations. Important life skills including writing checks, balancing a checkbook, completing basic tax documents, and understanding various payroll taxes will be covered. This course provides the basic skills for those who plan immediate entry into the business world and also provides a foundation for those who desire to continue their education in business.

ACCOUNTING II (640)

Prerequisite: C or better in Accounting I

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 11-12

Quality Points: Standard

Accounting II will expand on the knowledge, concepts, and applications presented in Accounting I. Students will use various simulations focusing on realistic experiences in maintaining accounting records for a corporation as well as a small business. Computerized accounting will be introduced and used throughout this course to further enhance their accounting education. This course is a must for all college-bound students planning to major in any business field.

INTRODUCTION TO BUSINESS (604)

Prerequisite: None

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 9-12

Quality Points: Standard

Business Essentials is an activity-based course designed to include Management, Marketing, Advertising, Finance, Communications, Career Development, and Business Ethics. In addition to the general business industry, the following industries will be explored: Sports Management, Travel and Entertainment, and Fashion. Students will acquire the necessary skills and knowledge to successfully further their education at the post-secondary level.

PRINCIPLES OF MARKETING (602)

Prerequisite: None

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 10-12

Quality Points: Standard

This course will focus on the major elements of the marketing mix, including demand, product planning, pricing, channels, and the logistics of dispersion and promotion. Principles, functions, and current marketing issues will be discussed. Practical case studies and marketing projects will be used to enhance theory.

LATROBEAN LAYOUT I (631)

Prerequisite: Journalism or Teacher Recommendation

Credit: 1

Meets: M-F (Year)

Open to Grade(s): 11-12

Quality Points: Standard

This course will prepare students to become editors for the school yearbook, The Latrobean. Students will be responsible for the writing of stories and captions, interviewing students to get quotes, and taking pictures for the yearbook. Students will also learn the web based program that is used to create the yearbook and they will develop a theme and cover design for their senior yearbook.

LATROBEAN LAYOUT II (633)
Prerequisite: C or better in Latrobean
Layout I or Teacher Recommendation

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 12
Quality Points: Standard

The students taking this course will design and create the school yearbook, The Latrobean. Students will work closely with the Latrobean Layout I students to gather information for stories, captions, and quotes, as well as taking pictures for the book. The editors will be responsible for making several publishing deadlines and communicating information to the school photographer and also the publishing company representative.

LATROBEAN BUSINESS (637)
Prerequisite: None

Credit: 1/2
Meets: M-F (fall)

Open to Grade(s): 11-12
Quality Points: Standard

The Latrobean Business staff will be responsible for soliciting, promoting, and selling business and patron advertisements, coordinating and promoting the Latrobean book sales, managing all financial aspects concerning the yearbook, and expanding public relations between the school district and the community.

Health & Physical Education

HEALTH AND PHYSICAL EDUCATION DEPARTMENT

HEALTH II (654) Credit: ½ Open to Grade(s): 9-12
Prerequisite: None Meets: Every other day (Year) Quality Points: Standard
Required for Graduation

HEALTH II (655/656) Credit: ½ Open to Grade(s): 9-12
Prerequisite: None Meets: M-F (Fall/Spring) Quality Points: Standard
Required for Graduation

This health course is designed to develop students' knowledge and skills necessary for choosing healthy lifestyle behaviors. Areas for discussion, interaction and decision-making are physical fitness, mental health, alcohol, tobacco, drugs, family living, and health careers. All classes are co-educational.

This course is only taught on-line.

LIFETIME ACTIVITIES (695/696) Credit ½ Open to Grade(s) 10-12
Prerequisite: pass 9th grade swim test Meets M-F (Fall/Spring) Quality Points: Standard

LIFETIME ACTIVITIES (681) Credit ½ Open to Grade(s) 10-12
Prerequisite: pass 9th grade swim test Meets: Every other day (Year) Quality Points: Standard

The mission of physical education is to facilitate students in improving their quality of life through regular physical activity. In this class, the teacher will use a student-centered approach while teaching the psychomotor, cognitive and affective aspects of physical fitness and sport. Emphasis is placed on each student attaining a high level of personal physical fitness as well as demonstrating personal responsibility and cooperation in all areas of the curriculum. The curriculum includes a variety of team sports, individual activities, and aquatics.

PERSONAL FITNESS (677/678) Credit: ½ Open to Grade(s): 10-12
Prerequisite: Must Pass Swimming Assessment Meets: M-F (Fall/Spring) Quality Points: Standard

PERSONAL FITNESS (679) Credit: ½ Open to Grade(s): 10-12
Prerequisite: Must Pass Swimming Assessment Meets: Every other day (Year) Quality Points: Standard

The purpose of this course is to provide students with a variety of teacher instructed activities that will teach them how to exercise safely, effectively, and with proper form. This is a program where students will get to see first-hand that you can achieve great results through proper training techniques. Students will work on, and be tested on, improvements in activities such as but not limited to; aerobics, water fitness, circuit training, free weight training, and core training. Students will work on addressing each of the five fitness components throughout the class. These components include; muscular strength, muscular endurance, body composition, flexibility and cardiovascular endurance. The students will be pre-tested at the beginning of class to measure their current level of fitness. At the end of the program, the students will participate in an activity that will tie in all of the components for a final test to measure their improvement.

LIFEGUARD TRAINING (685)

Credit: ½
Meets: M-F (semester)

Open to Grade(s): 10-12
Quality Points: Standard

Purpose: To provide necessary minimum skills training for a person to qualify to serve as a non-surf lifeguard.

- Prerequisite:
1. 15 years of age on or before the conclusion of class.
 2. Swim 500 yards continuously using each of the following strokes for at least 50 yards: crawl, breaststroke, and sidestroke.
 3. Surface dive to a minimum depth of 9 feet and bring a 10-pound brick to the surface.
 4. Tread water for 2 minutes with a 10-pound brick on the surface of the water.

Certification Requirements:

1. Pass written test with 80% minimum score.
2. Successfully complete final skills test.
3. Successfully complete the American Red Cross standard first aid course and CPR for the Professional Rescuer.

Books: Lifeguard Training Textbook

Cost: As determined by American Red Cross, Approximately \$85.00, paid for by the student.

Certification: 3 years life guarding and 1 year CPR for the Professional Rescuer

Family & Consumer Sciences

FAMILY AND CONSUMER SCIENCES

BASIC CULINARY SKILLS (807/808)
Prerequisite: None

Credit: ½
Meets: M-F (Fall/Spring)

Open to Grade(s): 10-12
Quality Points: Standard

This class will be the prerequisite for all of the Foods classes. In labs, the student will practice basic preparation skills and cooking techniques. Food and kitchen safety along with sanitation procedures will be emphasized. This course is designed to prepare the student for entry-level work in this field and teach basic kitchen survival skills.

FOODS I (806)
Prerequisite: Basic Culinary Skills

Credit: ½
Meets: M-F (Spring)

Open to Grade(s): 10-12
Quality Points: Standard

Students receive hands on experience in the fundamental principles of cookery. Emphasis will be placed on nutrition and menu planning, functions of ingredients, consumer science, kitchen management and quantity food production. A cafeteria worksite experience will be completed. Food safety and sanitation will be applied in all labs. Labs will include foods from all of the basic food groups, while preparing products from appetizers to desserts. Regional foods will also be discussed and prepared.

FABRIC ARTS (825/826)
Prerequisite: None

Credit: ½
Meets: M-F (Fall/Spring)

Open to Grade(s): 10-12
Quality Points: Standard

Fabric Arts focuses on the basics of fashion, clothing design, sewing machine usage, commercial pattern selection, fitting, and construction. The school provides a portion of supplies needed for the first project. Students will complete additional clothing and/or craft projects and are responsible for the cost of the materials.

FABRIC ARTS and DESIGN (836)
Prerequisite: Fabric Arts

Credit: ½
Meets M-F (Spring)

Open to Grade(s): 10-12
Quality Points: Standard

This course is designed as an extension of the Fabric Arts course. More detailed focus will be placed on the Elements of Design, Color and Textures. Topics will include a deeper look into the Fashion Industry and design trends as well as career opportunities. Basic construction projects will be completed including a community service and repurposing project. An Art to Wear unit will be included, taught in partnership with the Art department. This unit will focus on "one of a kind" fashion design. Students will be responsible for the cost of the course materials.

CONSUMER EDUCATION (809/804)
Prerequisite: None

Credit: ½
Meets: M-F (Fall/Spring)

Open to Grade(s): 10-12
Quality Points: Standard

Becoming independent and living on your own is the focus of this course. It is designed to give students the skills they need to be responsible consumers. Topics will include how to manage your money, financial fitness, and skills needed to be a wise consumer when purchasing goods and services. Areas explored include buying a car, obtaining insurance, setting up a bank account, renting an apartment, buying the right cell phone with an affordable plan and using credit cards wisely. If you want to learn your rights as a consumer, this course is for you!

LIFE SPAN LEARNING (855/856)

Prerequisite: None

Credit: ½

Meets: M-F (Fall/Spring)

Open to Grade(s): 10-12

Quality Points: Standard

If you are interested in learning about children, this course will be of relevance to you. Students will study the physical, social, emotional, and intellectual development of children and focus on ways to stimulate their learning. Topics will also include family finance, parenting responsibilities and care giving. Practical applications will be applied.

Technology Education

TECHNOLOGY EDUCATION

EXPLORING ENGINEERING (702)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course is designed to introduce students to the world of engineering. During this time students will study the engineering design process from start to finish starting with visualization and design of a project by using AutoCadd software. The students will finish by creating working prototypes and models of an idea that students will test and analyze. During this time students will complete multiple design challenges including trebuchets, hydraulic arms, electronics, wooden puzzles etc. Problem solving and team work will be stressed heavily in this course. This course will include a minimal lab fee.

CADD (710)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This is an introductory course in the field of Computer Aided Drafting and Design. This year long course will be divided into two areas, Technical Drawing and Architectural Drawing. In Technical Drawing, students will learn one-view, three view, isometric drawings, and 3D modeling, using AutoCad and Inventor software. Architectural Drawing will emphasize the use of AutoCad Architecture software to complete assigned drawings. Students will explore the structure of a house by drawing a 2D and 3D wall section, draw a floor plan, design a kitchen and bathroom, and work on a remodeling design. Students will also be challenged with problem solving activities using team concepts to complete a given task

POWER AND TRANSPORTATION SYSTEMS (737)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This course is designed to introduce students to the importance of transportation and how it impacts our daily lives. Students will study different areas of transportation such as air, water, and land. During this time students will participate in design challenges consisting of gliders, boat hulls, king of the hill mousetrap cars, a monster truck design and CO2 cars. Students will use electricity to power a remote controlled vehicle through a golf course. Students will also study and internal engine and its components

WOOD I (730)
Prerequisite: None

Credit: 1
Meets: M-F (Year)

Open to Grade(s): 10-12
Quality Points: Standard

This is an introductory course in wood technology. The first semester deals primarily in the development of hand skills; whereas, the second semester acquaints the student with fundamental machine woodworking. Students will also acquire basic skills operating a computer numerical control router (CNC) using various software.

* THERE WILL BE FEES FOR SUPPLIES

<u>WOOD II</u> (747)	Credit: 1	Open to Grade(s): 11-12
Prerequisite: C or better in Wood I or Teacher Recommendation	Meets: M-F (Year)	Quality Points: Standard

This is a course in machine woodworking. During the first semester proficient and safe operation of all power tools is stressed through required operations and projects. The second semester work emphasizes sound planning, creativity, and aesthetic design. Students will expand their previous CNC skills and apply them to their required project.

***THERE WILL BE FEES FOR SUPPLIES**

<u>WOOD SPECIALIZATION</u> (750)	Credit: 1	Open to Grade(s): 12
Prerequisite: B or better in Wood II or Teacher Recommendation	Meets: M-F (Year)	Quality Points: Standard

A program designed for the advanced student who wishes to explore various specialized areas of woodworking. The student is allowed to elect challenging projects that fall within his/her ability level. Students will explore advanced CNC applications and apply them to their selected projects.

*** THERE WILL BE FEES FOR SUPPLIES**

<u>ADVANCED CADD</u> (723)	Credit: 1	Open to Grade(s): 11-12
Prerequisite: CAD	Meets: M-F (Year)	Quality Points: Standard

Advanced CADD is a continuation of CAD. This course will consist of architectural and mechanical drafting. During the architecture portion, students will use Auto Cad Revit software to create floor plans, plot plans, section views, and elevation views of their design. The structure of a house will be studied by examining framing principles. Students will also work on designing a "green" building. During the mechanical portion, students will complete an assembly drawing of a grinder vise and they will study auxiliary views as well as sectional view drawings. Students will use AutoCad and Inventor software. Parametric modeling will be stressed very heavily. Students will also be given the chance to develop an individual design which can be architecturally or mechanically based.

<u>ROBOTICS ENGINEERING</u> (738)	Credit: 1	Open to Grade(s): 11-12
Prerequisite: None	Meets: M-F (Year)	Quality Points: Standard

This advanced course in Technology Education will focus on the world of Robotics from the simple construction of a tethered robot to compete in a robo soccer tournament, to a more advanced egg beater challenge. Students will then progress to a wireless platform capable of performing autonomous movement. Students will work with Robot C programming language and sensors to help the robot manipulate through different situations. This course will include a minimal lab fee.

Art

ART DEPARTMENT

ART EXPLORATION (781/782)
Prerequisite: None

Credit: ½
Meets: M-F (Fall/Spring)

Open to Grade(s): 9-12
Quality Points: Standard

ART EXPLORATION (780)
Prerequisite: None

Credit: ½
Meets: Every other day (Year)

Open to Grade(s): 10-12
Quality Points: Standard

Art Exploration is an introductory visual arts course for 10th, 11th, and 12th grade students. Review of the elements and principles of design in conjunction with basic skills development in drawing, painting, printmaking, sculpture, and Art History will be investigated.

Art Exploration is a prerequisite for other visual arts courses except ceramics. A grade average of a C or better is required for any student to go on to other visual arts courses.

CERAMICS I (785/786)
Prerequisite: None

Credit: ½
Meets: M-F (Fall/Spring)

Open to Grade(s): 10-12
Quality Points: Standard

Students will explore a variety of ceramics techniques and processes such as hand building, throwing, glazing and decoration. Emphasis will be placed on the elements and principles of design throughout the course. This course is designed for the student who has an interest in pursuing a career in the fine arts, and/or the student who enjoys ceramics as a form of personal expression.

CERAMICS II (755/756)
Prerequisite: Ceramics I and
Teacher Recommendation

Credit: ½
Meets: M-F (Fall/Spring)

Open to Grade(s): 10-12
Quality Points: Standard

Students will further develop the skills learned in Ceramics I. Hand building and throwing techniques will be further developed and practiced. Students will have the option to investigate alternative firing techniques, large-scale projects, and basic kiln procedures. This course is designed for the student who has an interest in pursuing fine arts as a career, and/or the student who enjoys ceramics as a form of personal expression.

DRAWING AND PAINTING (783/784)
Prerequisite: Art Exploration

Credit: ½
Meets: M-F (Fall/Spring)

Open to Grade(s): 10-12
Quality Points: Standard

DRAWING AND PAINTING (754)
Prerequisite: Art Exploration

Credit: ½
Meets: Every other day (Year)

Open to Grade(s): 10-12
Quality Points: Standard

In this course students will work at an intermediate to advanced level in developing their drawing and painting skills while investigating a variety of drawing and painting media. Techniques in graphite, colored pencil, charcoal, conte crayon, pastel, and ink, will be explored, as well as extensive work in watercolor, acrylic, oil, and mixed media.

ART HISTORY 2 (788)
Prerequisite: Art History 1

Credit: ½
Meets: M-F (Spring)

Open to Grade(s): 10-12
Quality Points: Standard

This course is designed for students who have an interest in art and art history as a possible career option. Visual art as it relates to history and culture will be explored, with concentration on art styles and time periods; **the Italian Renaissance, the Renaissance in the Netherlands, Mannerism, Baroque, Rococo, Neoclassicism, Romanticism, Realism, Impressionism, Post-Impressionism, and contemporary art** will be examined. Students will have the opportunity to create art, as well as study art of the past and present.

PORTFOLIO PREPARATION (777)
Prerequisite: Art Exploration and one additional art course

Credit: ½
Meets: M-F (Fall)

Open to Grade(s): 12
Quality Points: Standard

This course is designed for seniors who have an interest in art as a career and wish to build a portfolio for use in college entrance and/or job interviews. This course involves a more comprehensive approach to skills, techniques, and content. Emphasis will be placed on visual expression, creative thinking, and individual growth.

Music

MUSIC DEPARTMENT

CONCERT CHOIR (959) Credit: 1 Open to Grade(s): 10-12
Prerequisite: None Meets: M-F (Year) Quality Points: Standard

CONCERT CHOIR (948) Credit: .5 Open to Grade(s): 10-12
Prerequisite: None Meets: Every other day (Year) Quality Points: Standard

Concert Choir provides opportunities for students to develop their musical potential and aesthetic understanding through singing in a choral ensemble. Study includes the care and cultivation of a beautiful tone, aesthetic awareness, the ability to read music, the building of technical skills, team spirit and responsible rehearsal habits. Students will strengthen listening skills and their ability to analyze and evaluate music and music performances. The choir will present two public concerts during the year.

CHAMBER CHOIR (960) Credit: 1 Open to Grade(s): 10-12
Prerequisite: Audition with Director Meets: M-F (Year) Quality Points: Standard

Acceptance in Chamber Choir is by audition only. Students will study a wide range of choral music styles with emphasis on "a cappella" singing. The choir provides an opportunity for continued growth in vocal performance. Students will build upon their prior musical knowledge to develop advanced vocal and choral techniques, as well as music history, theory and sight-singing skills. In addition to presenting three public concerts, this group will also perform at other out-of-school events.

CONCERT BAND (939) Credit: 1 Open to Grade(s): 10-12
Prerequisite: None Meets: M-F (Year) Quality Points: Standard

CONCERT BAND (938) Credit: ½ Open to Grade(s): 10-12
Prerequisite: None Meets: Every other day (Year) Quality Points: Standard

Concert Band is available for all students in grades 10 – 12 that wish to play a wind or percussion instrument in an ensemble setting. Students will improve their ability to listen and respond to music while gaining the skills to play together. A variety of concert band repertoire will be performed during the school year at multiple evening concerts.

WIND ENSEMBLE (918) (Pending Board Approval) Credit: ½ Open to Grade(s): 10-12
Prerequisite: None Meets: Every other day (Year) Quality Points: Standard

Acceptance in Wind Ensemble is by audition only. Students that audition for this ensemble must play a wind or percussion instrument. Students will perform repertoire from a variety of styles. This course will focus on how to perform in an ensemble setting. Students are also recommended but not required to enroll in the concert band course. Specific instrumental techniques, music reading skills, and music theory will also play a significant role. There will be multiple evening concerts during the school year.

JAZZ ENSEMBLE (932) Credit: ½ Open to Grade(s): 10-12
Prerequisite: Audition with Director Meets: Every other day Quality Points: Standard

Acceptance in Jazz Ensemble is by audition only on the following instruments: saxophone, trombone, trumpet, piano, drum set, guitar, and bass guitar. All wind and percussions must also be enrolled in Wind Ensemble. This ensemble is open to any individual who can demonstrate exceptional ability or potential on their musical instrument and an interest in the study of jazz. The ensemble will study a variety of styles including blues, big band, swing, funk, and modern jazz. Various performances will be scheduled throughout the year for school and the community.

Online Education

On-Line Courses

GLSHS students have access to a full online curriculum of courses offered through the Westmoreland Intermediate Unit (WIU) by WIU teachers. Course offerings and availability are subject to change at the discretion of the WIU. Interested students should notify their guidance counselor during their individual scheduling meeting. WIU's online course catalog is available through the following website:

https://docs.google.com/a/glisd.us/document/d/1Jm4EuuaFUGD2XRGeDaBRt5Gz_z1_InNIt7kSDOlyk9s/edit?pli=1

Partnership Programs

Allied Health Careers

This program will provide interns with information to make an accurate decision about a future health care career. Interns gain academic, personal and technical skills. The program is flexible to meet the individual needs of those interns who apply for acceptance. In order to accommodate this, transportation to Excelsa Health Latrobe Area Hospital and other clinical sites must be provided by the intern. This feature allows interns the flexibility they need regarding scheduling and hospital activities at the end of the day. Interns must have at least one period free at the end of the day. The interns spend 90+ hours or more in classroom instruction and clinical rotations. Interns must have a solid preparation in science, mathematics, and English. Classes will include health care and management trends, medical terminology, anatomy, and physiology, safety, infection control, first aid, CPR, patient confidentiality, legalities and ethics. Daily objectives and assignments will document hours. Journaling will reflect activities. One personal eight hour practicum case study is required. Credit towards graduation may be awarded by school districts. Clinical will encompass diagnostic, therapeutic, and ancillary health care careers such as: laboratory, radiology, pharmacy, veterinarian, cardiac, nursing, optical, emergency, family practice, pediatrics, chiropractic, surgical, dentistry, speech therapy, physical/occupational therapies

Career Opportunities

Students who complete this internship program to enter post-secondary education in preparation for a variety of professional medical careers, such as radiology, physical therapy, occupational therapy, nursing, medicine, pharmacy, or chiropractic, to name a few. This program is not intended for students who plan to enter the world of work directly after high school graduation, but for those who plan to pursue a professional career after completing a post-secondary education program.

Scope & Sequence

GR	Math	English	Science	Others
9	Pre-Algebra Algebra I Algebra II	English (9)	Biology	
10	Algebra I Acad. Algebra II Acad. Geometry	Acad. English II	Acad. Biology Chemistry	
11	Algebra II Acad. Algebra II Trigonometry Acad. Trigonometry Analytic Geometry	Acad. English III	Chemistry Physics Anatomy & Physiology	
12	Trigonometry Acad. Trigonometry Analytic Geometry	Acad. English IV	Prin. Of Tech Physics Anatomy & Physiology	Allied Health

Computer Engineering Technology/Cisco

Graduates of the Computer Engineering Technology / CISCO program will have the opportunity to prove their knowledge by obtaining a variety of computer – related certificates. These include Microsoft’s MCP and MCSE, Comp TIA’s A+, Network +, and Security +, and CISCO’s prestigious CCNA certification. The first year of the program covers computer hardware and basic computer networking. These are skills that are essential to almost any career in computer technology. Over the next two years, a portion of each class is set aside to teach the CISCO CCNA curriculum. Students who wish to take just this portion of the program may do so if they are able to find transportation to and from school. It will be offered in the PM only. Traditionally enrolled students, on the other hand, will learn CISCO curriculum as well as wireless networking, computer and Internet security, and Visual Basic .Net computer programming. The Computer Engineering Technology / CISCO program is very demanding and academically challenging, but those who can perform well will have many lucrative job offers due to the high demand for skilled workers in the computer technology field. Possible occupations in this field include computer technicians, computer support specialists, computer hardware engineers, network administrators, system administrators, computer security specialists, network security managers, data security analysts, IT managers, computer programmers, software engineers, and system analysts.

Computer Engineering Technology/Cisco Outline

Topics	WCCC Articulation	Certifications
Computer Hardware Installation, configuration, and Upgrading Diagnosing and Troubleshooting Preventative Maintenance Motherboard Processors, and Memory	Computer Technology: Networking CPT 248 PC Hardware CPT 249 PC Troubleshooting	Comp TIA A+
Basic Networking 1 st Media and Topologies Yr. Protocols and Standards Network Implementation & Support	Comp Tech: Telecommunications CPT 261 Windows 200 Pro Comp Tech: Technical Support CPT 266 Network Administration CPT 161 Introduction to Telecommunications	Comp TIA A+ Network+
Local Area Networks (CISCO Sem. ½) Telecommunications Fundamentals	Comp Tech: Telecommunications Routers and routing Basics CPT 211 Routing Technologies	CCNA (CISCO) Certified Network CPT 171 Administrator)
Wireless Networking & Internet Security 2 nd General Computer Security Concepts Yr. Communications & Infrastructure Security and Basics of Cryptography		
Wide Area Networks (CISCO Sem. ¾) 3 rd CPT 257 Switching Technologies Yr. Switching Basics & Intermediate Routing WAN Technologies	Comp Tech: Telecommunications CPT 291 WAN Technologies	
Year Voice Over IP Telephony Telecommunication Computer Programming Visual Basic NET programming		MCP (Microsoft) Certified Prof.

College in High School Program

Pennsylvania Highlands Community College*

Students enrolled in the courses listed below are eligible to participate in the Pennsylvania Highlands Community College Education Program. This program allows high school students to earn college credits while in high school, allowing them to jump start their college career by earning transferable college credits. In 2013-2014, the course cost was \$49 per credit. The price for the 2014-2015 school year will be determined.

Accounting I	Astronomy	Anatomy & Physiology
Intro to Calculus	Pre-Calculus	AP Statistics
Calculus	AP Calculus AB	AP Calculus BC
AP English Language and Composition	Art History I & II	Principles of Marketing
Introduction to Business		

Mt. Aloysius College in High School Program*

Juniors and seniors enrolled in one of the following courses; AP Biology, AP Calculus AB, AP Calculus BC, and AP English Literature and Composition are eligible to participate in Mt. Aloysius College in High School Program.

Mt. Aloysius will offer to any interested student the opportunity to earn 3 or 4 college credits per course at a discounted rate. The program requirements are: students must be a junior or senior, have a preexisting cumulative GPA of 3.0, and maintain a minimum grade of 2.0 "C" in each college in high school course in which the student is enrolled.

In 2013-2014 the course cost was \$50 per credit plus a yearly registration fee of \$20. The price for the 2014-2015 school year will be determined. Once your child completes the course successfully meeting Mt. Aloysius College in High School requirements they will be issued a Mt. Aloysius College transcript with the course(s) they completed, grade(s), and credit(s) reflected.

AP Biology will be counted as a 4 credit BL101 General Biology course. AP Calculus AB will count as a 3 credit CM113 Pre Calculus course*. AP Calculus BC will count as a 4 credit CM117 Calculus I course*. AP English Literature and Composition will count as a 3 credit EN102 Introduction to Literature course. Please be advised your child can only gain credit for one of the AP Calculus courses not both.

Seton Hill University*

Seton Hill University is working with our high school to offer eligible students the opportunity to earn college credit while in high school through the College in High School (CHS) Program. Upon successful completion of each course, students will receive college credit form Seton Hill University. In 2013-2014 the course cost was \$220. The price for the 2014-2015 school year will be determined.

AP Biology	AP Chemistry	AP Physics	Law I & Law II
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Saint Francis University*

Saint Francis University is working with our high school to offer eligible students the opportunity to earn college credit while in high school through the College in High School (CHS) Program. Upon successful completion of each course, students will receive college credit form Saint Francis University. In 2013-2014 the course cost was \$55 per credit. The price for the 2014-2015 school year will be determined.

Spanish III	French III	German III
Spanish IV	French IV	German IV
AP Spanish	AP French	AP German

** Credits earned through any of our dual enrollment programs have transferred to many colleges and universities. You are responsible for determining if the college or university in which you are interested in attending accepts dual enrollment credits. The best way to do this is to contact the admissions office of the school you are interested in attending. At no time will your counselor or teacher be able to assure you of a course's articulation.*

Eastern Westmoreland Career & Technology Center

EASTERN WESTMORELAND CAREER AND TECHNOLOGY CENTER

4904 Route 982
Latrobe, Pennsylvania 15650
724-539-9788

GENERAL INFORMATION

While in attendance at the Career & Technology Center you are considered a Career & Technology Center (CTC) student. When attending Greater Latrobe Senior High School you are considered a student of Greater Latrobe Senior High School. The CTC and Greater Latrobe Senior High School work cooperatively in all matters involving Greater Latrobe Senior High students.

Therefore, students desiring and selecting to attend the CTC are expected to attend when scheduled.

If a pep assembly or any other activity is occurring at the home school during the time that you are scheduled for the CTC, you are expected to attend your scheduled classes at the CTC unless notified by the home that you will be remaining there. The principal must approve any exceptions.

*** Students wishing to attend EWCTC must have earned six credits prior to their sophomore year.**

EWCTC and Westmoreland County Community College are working together to develop a focused sequence of advanced technical careers. EWCTC students entering the Community College will have already taken courses that will not need to be repeated; as a result, students will be able to complete Associate Degree course work in less time and/or be able to take more advanced courses. Students who meet the requirements of academic rigor at Greater Latrobe and complete the course work at EWCTC with approval of their instructor will be able to **receive nine to twenty-seven credits** towards their Associate Degree at WCCC.



COURSE DESCRIPTIONS

2014-2015

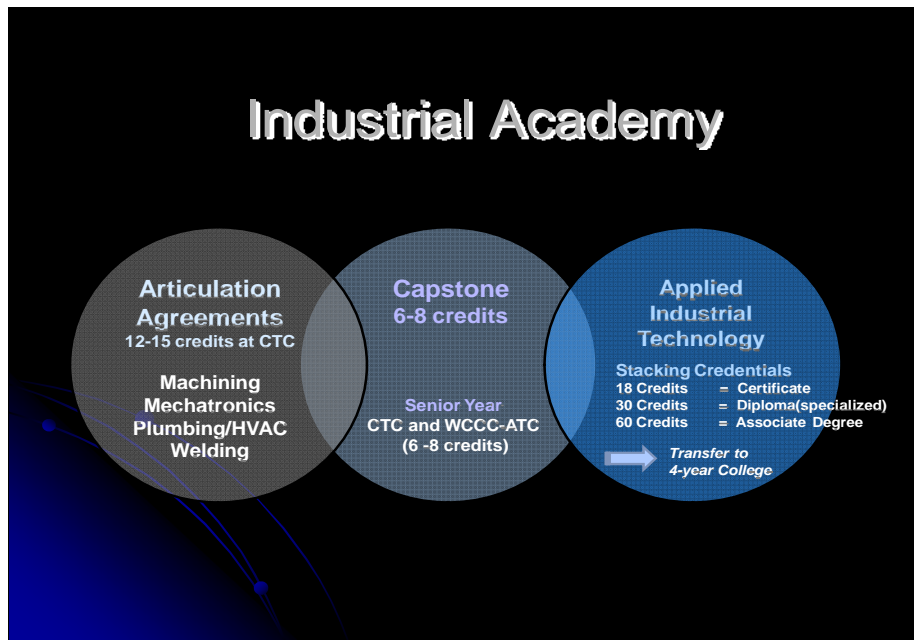
**EASTERN WESTMORELAND
CAREER & TECHNOLOGY CENTER**

**4904 Route 982
Latrobe, PA 15650
724-539-9788
www.ewctc.net**

EQUAL OPPORTUNITY EDUCATION FACILITY

INDUSTRIAL ACADEMY

Eastern Westmoreland Career and Technology Center and Westmoreland County Community College are proud to offer students who enroll in the Machine Tool Technology, Mechatronics, Plumbing/HVAC and Welding programs the opportunity to earn up to 20 college credits and a **Certificate in Applied Industrial Technology**. Upon graduation, these students will then have the option to continue their coursework at WCCC to earn a specialized diploma or Associate's Degree.



ALLIED HEALTH (INTERNSHIP PROGRAM) ONE SEMESTER GRADE 12

This program will provide interns with information to make an accurate decision about a future health care career. Interns gain academic, personal and technical skills. The program is flexible to meet the individual needs of those interns who apply for acceptance. In order to accommodate this, **transportation to Excelsa Health Latrobe Area Hospital and other clinical sites must be provided by the intern.** This feature allows interns the flexibility they need regarding scheduling and hospital activities at the end of the day. Interns must have at least one period free at the end of the day. The interns spend 90+ hours or more in classroom instruction and clinical rotations. Interns must have a solid preparation in science, mathematics and English. Areas of study will include health care and management trends, medical terminology, anatomy and physiology, safety, infection control, first aid, CPR, patient confidentiality, legalities and ethics. One, personal, eight-hour practicum case study is required. Clinical will encompass diagnostic, therapeutic, and ancillary health care careers such as those in: laboratory, radiology, pharmacy, veterinarian, cardiac, nursing, optical, emergency, family practice, pediatrics, chiropractic, surgical, dentistry, speech therapy, physical/occupational therapies and others.

AUTOMOTIVE TECHNOLOGY - CIP 47.0604
FULL YEAR – 3 CREDITS GRADES 10-11-12

This program is designed to provide students with the technical knowledge and hands on experience of the automotive repair process. Students enrolled in this program learn to accurately locate and diagnose the source of on-board computer system malfunctions using digital diagnostic equipment. Students will learn to make proper repairs and perform periodic maintenance inspections to maintain today’s high technical automobiles in top running condition. The Automotive Program is certified through the National Institute for Automotive Service Excellence (ASE), a nationally-recognized agency in the automotive industry.

<p>Units of Instruction Safety Tools Suspension & Steering Systems Brakes Electrical Systems Engine Performance</p>	<p>Postsecondary Schools Pennsylvania College of Technology Community College of Allegheny County WyoTech University of Northwestern Ohio</p> <p>Industry Certifications National Institute for Automotive Service Excellence (ASE) State Safety Inspection/Emissions Inspection</p>	<p>Career Majors Master Service Technician Engine Performance Specialist Transmission Specialist Insurance Adjuster Service Manager Automobile Sales Person</p>
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CABINETMAKING – CIP 48.0703
FULL YEAR – 3 CREDITS GRADES 10-11-12

Cabinetmaking involves the design and construction of custom furniture, cabinets and countertops using specialty woods and high tech machinery. Cabinetmakers/millworkers are skilled professionals who are comfortable working with technically sophisticated equipment in a manufacturing setting. A large portion of the cabinetmaker’s job is to set up and operate a variety of machines in order to craft kitchen cabinets, doors, tables, desks, chairs, etc. Students in this program will learn how to draw and read blueprints to determine specific material needs, from the type of wood to the required finish. Instruction will also cover hardware installation, finishing procedures, assembly, and installation work.

***Students enrolled in this program rotate through the four construction programs during the first year.*

<p>Units of Instruction Hand Tools/Power Tools and Machining Operations Wood Identification Blueprint Reading/Planning Hardware Installation Finishing Procedures Cabinet and Furniture Construction</p>	<p>Postsecondary Schools Pennsylvania College of Technology Thaddeus Stevens College WCCC Penn State University</p> <p>Industry Certifications OSHA, CPR, AED First Aid</p>	<p>Career Majors Cabinetmaker Furniture Maker Kitchen Remodeler Furniture Designer Sprayer/Finisher</p>
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COLLISION REPAIR TECHNOLOGY – CIP 47.0603
FULL YEAR – 3 CREDITS GRADES 10-11-12

Collision Repair Technology is rapidly evolving and becoming more sophisticated with the use of new technologies including computers and hydraulics. Students in this program learn all facets of collision repair, from repairing small dents to total reconstruction of today’s vehicles. The Collision Repair Technology program uses the state-of-the-art water-based paint system to educate students on proper painting techniques. Estimating job costs, time, and material help students prepare for success in the workplace. This program has received national accreditation by NATEF.

<p>Units of Instruction Collision Design & Construction Sanding Techniques Refinishing Equipment & Spraying Technique Damage Reports & Estimating Welding Auto Body Metal Structural Repair</p>	<p>Postsecondary Schools Community College of Allegheny County Pennsylvania College of Technology University of Northwestern Ohio WyoTech</p> <p>Industry Certifications National Institute for Automotive Service Excellence (ASE) PPG Certification</p>	<p>Career Majors Auto Detailer Automotive Estimator Auto Body Repair Technician Collision Repair Technician Painter Metal Straightening Technician</p>
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COMPUTER ENGINEERING TECHNOLOGY – CIP 11.0901
FULL YEAR – 3 CREDITS GRADES 10-11-12

Graduates of the Computer Engineering Technology program will have the opportunity to prove their knowledge by obtaining a variety of computer-related certifications. These include Comp TIA A+, NET+, and Security+, and CISCO’s prestigious CCENT and CCNA certifications. The first year of the program covers computer hardware, basic computer networking, introduction to programming languages, and video game systems design. Over the next two years, a portion of each class is set aside to teach the CISCO Academy curriculum and introduction to mobile app design. Traditionally enrolled students will learn the CISCO curriculum as well as wireless networking, computer and Internet security, and several computer programming languages (HTML, PHP, JavaScript, MySQL, and Java). Students have the potential to earn up to 23 college credits as a result of the national articulation agreement. In lieu of the three-year program, students may choose to participate in the CISCO-CCNA Only Option. This is a two period class offered to juniors and seniors in the afternoon.

<p>Units of Instruction Computer Hardware (A+) Computer Software (A+) Network Technologies Network Operating Systems Network Recovery Upgrading Network Network Security Administration</p>	<p>Postsecondary Schools Clarion University Pennsylvania State University University of Pittsburgh Westmoreland County Community College</p> <p>Industry Certifications Comp TIA A+ (Hardware and Software) Comp TIA NET + CISCO CCENT CISCO CCNA Comp TIA Security +</p>	<p>Career Majors Computer Information Analyst Computer Programmer Database Administrator Network Administrator Network Technician</p>
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CONSTRUCTION TRADES – CIP 46.9999
FULL YEAR – 3 CREDITS GRADES 10-11-12

Construction Trades prepares students with the basic technical and hands-on skills required for the erection and installation of buildings and other structures. Students will develop technical and math skills required in all stages of the construction process including blueprint reading, rough framing, door and window installation, stair construction, roofing and siding, basic wiring, design and layout, finishing and trim installations.

***Students enrolled in this program rotate through the four construction programs during the first year.*

<p>Units of Instruction Residential Wiring Operation of Power/Hand Tools Building Layout Blueprint Reading Roof Framing Finish Carpentry Wall Framing</p>	<p>Postsecondary Schools Pennsylvania College of Technology Triangle Tech Thaddeus Stevens College of Technology</p> <p>Industry Certifications PA Builders Association Skills Certificate (PBA) OSHA, CPR, AED First Aid</p>	<p>Career Majors General Contractor Building Superintendent Job Site Supervisor Quality Control Technician Estimator Project Manager</p>
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COSMETOLOGY – CIP 12.0401
FULL YEAR – 3 CREDITS GRADES 10-11-12

Cosmetology involves the science of improving beauty through the care and treatment of skin, hair, and nails. Students in the Cosmetology Program learn all aspects of hair, nail, and skin care. In addition to technical skills, students learn hands-on by participating in clinical experiences. During clinical, students practice their skills in our on-site beauty salon where they schedule appointments with clients, sanitize equipment, perform services and keep accurate records.

<p>Units of Instruction Hairstyling Permanent Wave Hair Coloring Nail Technology Chemical Relaxer & Ethnic Hair Salon Management</p>	<p>Postsecondary Schools Pennsylvania Academy of Cosmetology Douglas Education Center Empire Beauty School</p> <p>Industry Certification Pennsylvania State Board of Cosmetology</p>	<p>Career Majors Cosmetologist Nail Technician Salon Manager Salon Owner Make-Up Artist Hair Stylist Mortuary Beautician</p>
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CULINARY ARTS – CIP 12.0508
FULL YEAR – 3 CREDITS GRADES 10-11-12

Culinary Arts is a basic program to develop a professional foundation in the work habits, techniques, and attitude necessary to obtain and retain entry-level position in the food service industry. Students are prepared for all phases of the food service industry including short order cook or server. Training includes menu planning, portion sizing, and food cost control measures as well as purchasing and inventory control. The procedures, method, goal, and laboratory experiences are directed toward a variety of career objectives and educational needs of individual students. Our program offers students a supervised situation in which to practice leadership responsibilities, even though additional education may be desired upon graduation from high school. Pride in and the dignity of gainful employment appropriate to one’s capacities, skills and ability are a strong emphasis of the program. Students have the opportunity to earn a ServSafe Certificate, along with the PA Food Employee Certification provided by the Pennsylvania Department of Agriculture.

<p>Units of Instruction Basic Cooking Skills Prepare Cold Foods/Beverages Produce Bakery Goods/Desserts Prepare Meats and Poultry Plan, Organize and Administer Culinary Program</p>	<p>Postsecondary Schools Art Institute of Pittsburgh Indiana University of PA Pennsylvania College of Technology Pennsylvania Institute of Culinary Arts Westmoreland County Community College</p> <p>Industry Certifications ServSafe Certification CPR, AED First Aid</p>	<p>Career Majors Chef Baker Banquet Manager Hotel Restaurant Management Dietician Cake Decorator</p>
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DIGITAL MEDIA TECHNOLOGY – CIP 10.9999
FULL YEAR – 3 CREDITS GRADES 10-11-12

The evolution of digital media in our culture has created a demand for professionals in web design, animation, multimedia, digital video production, and digital photography. Students interested in pursuing one of these careers will benefit from attending the Digital Media Technology program.

Designed to provide students with the technical and job skills needed to succeed in these industries, the DMT program offers hands-on experience with state of the art equipment and software. Students attending the DMT program become daily users of industry standard software including Adobe CS4 Photoshop for image editing; Adobe CS4 Premiere and After Effects for digital video editing; Adobe CS4 Dreamweaver for web page authoring; and Adobe Flash for multimedia animation. Students also have the opportunity to work with professional video and Digital SLR cameras.

Curriculum is student-centered and allows for practical learning experiences where students apply their skills by managing nonprofit or school wide projects. Visual Literacy, Computer Literacy, Multimedia Design, Photography, Video Production, Image Editing, and Safety are areas of concentration throughout the program.

<p>Units of Instruction Digital Design Photography Video Production Web Design Flash Animation Photoshop</p>	<p>Postsecondary Schools Art Institute of Pittsburgh California University of PA Indiana University of PA Oakbrook Academy Pennsylvania College of Technology Westmoreland County Community College</p> <p>Industry Certifications Adobe Certified Associate</p>	<p>Career Majors Web Page Designer Multimedia Artist Video Producer Photographer Marketing/Advertising Public Relations Graphic Design</p>
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GRAPHIC COMMUNICATIONS – CIP 10.0399
FULL YEAR – 3 CREDITS GRADES 10-11-12

This course will help students understand the technologies of print media, preparing them for careers in today’s most dynamic fields. Skills are developed in a variety of areas including digital imaging, typography, graphic design, desktop publishing, image capture and graphics. Students are challenged to understand and implement current industry trends utilizing Macintosh computers in conjunction with a vast array of digital printing applications. Program specific software includes In Design, Photoshop, Illustrator, and Acrobat.

Students have the opportunity to receive industry certification in two areas: Introduction to Graphic Communications and Digital File Preparation. Students that graduate with PrintED certification have the equivalent of six months of on-the-job training.

<p>Units of Instruction PrintEd Accreditation Program Digital File Preparation Typography Page Layout Image Capture Press Operations Binding and Finishing Illustration Color Theory</p>	<p>Postsecondary Schools Art Institute of Pittsburgh Pittsburgh Technical Institute California University of PA Oakbridge Academy of Arts Pennsylvania College of Technology Westmoreland County Community College</p> <p>Industry Certifications PrintEd Certification Adobe Certified Associate</p>	<p>Career Majors Graphic Designer Creative Director Print Production Artist Cartoonist Digital Imaging Specialist Graphic Artist Illustrator Offset Press Operator</p>
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HEALTH OCCUPATIONS TECHNOLOGY – CIP 51.0899
FULL YEAR – 3 CREDITS GRADES 10-11-12

The Health Occupation Technology Program offers a combination of subject matter and clinical education designed to prepare individuals for entry level positions in the health field. The program covers all requirements for the first step on the health career ladder and provides basic preparation for "spring boarding" to other Health Occupation careers such as, but not limited to, Licensed Practical Nurse, Registered Nurse, Lab Technician, X-ray Technician, Dietician, Medical Transcriptionist, Unit/Ward Clerk, etc. Successful completion of the program will provide the graduate with eligibility for the PA State Competency Evaluation for Nursing Assistants and a completed task list of medical office assistant competencies.

Nurse Assisting: Nurse Assisting is designed to prepare students to work in an entry level position in a health care facility. Students will study basic nursing skills, infection control, rights/abuse prevention, personal care skills, basic wound care, mobility skills, nutrition/hydration, client’s rights, and restorative skills. Upon successful completion of the 200 hour theory and clinical requirements, students will participate in the 40 hour clinical rotation where they will provide care to patients in an actual health care facility under supervision of their instructor. Students will then qualify to take the Pennsylvania Certified Nurse Aide exam. Upon successful completion of the state exam, students will be placed on the PA Nurse Aide Registry as Certified Nurses Aides. Students will also have the opportunity to participate in the cooperative education program where they continue their learning in an actual health care facility.

Medical Assisting: Medical Assisting primarily focuses on two areas: administration and clinical. The administration curriculum includes medical office management, business administration, medical insurances, transcription, recordkeeping, and accounting. The clinical curriculum focuses on medical office procedures consisting of patient assessment, lab techniques, patient documentation, anatomy/physiology, medical terminology, medical law and lab safety. Students enrolled in the medical assisting program will study both theory and clinical matter in the health career field. Students will have the opportunity to participate in job shadowing activities and the cooperative education program where students continue to learn in an actual workplace setting.

<p style="text-align: center;">Units of Instruction</p> <p>Human Needs & Development Infection Control Safety & Body Mechanics Medical Terminology Nursing Assistant & Care Team Legal & Ethical Issues Personal Care/Nursing Skills Rehab/Mental Health & Illness Emergency Care & Disaster Preparedness</p>	<p style="text-align: center;">Postsecondary Schools</p> <p>Westmoreland County Community College University of Pittsburgh Penn State University Conemaugh School of Nursing Western School of Health & Business Careers Pennsylvania College of Technology</p> <p style="text-align: center;">Industry Certifications</p> <p>PA Nurse Aide Certification CPR, AED, First Aid Community First Aid and Safety</p>	<p style="text-align: center;">Career Majors</p> <p>Licensed Practical Nurse Nurse Aide Registered Nurse Medical Assistant Occupational Therapist Physical Therapist Medical Office Assistant Medical Transcriptionist</p>
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MACHINE TOOL TECHNOLOGY – CIP 48.0507
FULL YEAR – 3 CREDITS GRADES 10-11-12
***INDUSTRIAL ACADEMY (see page 2)**

Almost every product that we use on a daily basis has gone through a machining process of one type or another. In EWCTC’s machine tool technology program the students learn how to create the parts that make modern technology work. A machinist can take raw materials and produce a specialized finished product through knowledge that is a combination of theoretical information and hands-on experience. With practical experience in bench work, assembly layout, manual machining and numerical control programming, and more, the student will be prepared to handle a wide range of responsibilities in the metalworking industry.

Early emphasis will be placed on measuring tools and basic machining principles gradually growing skills until the student is ready to make National Institute of Metalworking Skills (NIMS) projects. Upon completion of this program, the student will have achieved an excellent basis upon which to enter related employment, post-secondary education, or enter the National Tool and Machining Association Apprentice Training Program. This program is accredited by the National Institute for Metalworking Skills.

<p>Units of Instruction Lathe Operations & Threading Band Saw, Drill Press & Mill Operations Grinder Operations & Grinding Threading Tools Blueprint Reading Master CAM CNC Lathe Computer Measuring Machine</p>	<p>Postsecondary Schools Pennsylvania College of Technology *Westmoreland County Community College California University of PA University of Pittsburgh</p> <p>Industry Certifications National Institute of Metal Working Skills (NIMS)</p>	<p>Career Majors Mechanical Engineer Machinist Apprentice Shop Foreman Tool & Die Maker Machine Operator Quality Control Inspector CNC Setup and Programmer</p>
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MASONRY – CIP 46.0101
FULL YEAR – 3 CREDITS GRADES 10-11-12

Masonry is the use of brick, block and stone to create structural projects. Students learn to construct foundations, brick veneer, fireplaces, arches, and retaining walls. They will get extensive hands on training of the basics of brick and block laying. Students will get a view of all phases of masonry construction both residentially and commercially. They will learn how to set up supply, layout, construct and finish projects on their own. Students will also learn the basics of layout, estimating and blueprint reading of masonry projects.

An introduction to concrete work and tiling is also available. Here, the students learn the basics of footings, sidewalks, and concrete slabs. Layout and installation of various tile types are also introduced.

Upon completion of required tasks, students are able to earn an Advanced Certificate of Completion by constructing various advanced and more challenging masonry projects. Arches, projections, quoins, rakes, and serpentine projects are examples of the advanced projects introduced. Hard work, quality of work and attention to detail are stressed daily. The goal here is give students a real world masonry experience to better prepare them for a career or a post secondary masonry education.

***Students enrolled in this program rotate through the four construction programs during the first year.*

<p>Units of Instruction Blueprint Reading Building Site Preparation Scaffold Building/Safety Power Tool Safety Bricklaying Techniques Blocklaying Techniques Fireplace & Chimney Construction</p>	<p>Postsecondary Schools International Masonry Institute PA Local #9 Apprenticeship Pennsylvania College of Technology Thaddeus Stevens School of Technology</p> <p>Industry Certifications PA Builders Association Skills Certificate (PBA) OSHA, CPR, AED First Aid</p>	<p>Career Majors Stone Mason Bricklayer Contractor Ceramic Tile Design Job Site Supervisor Masonry Restoration</p>
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MECHATRONICS ENGINEERING – CIP 15.0303

FULL YEAR – 3 CREDITS GRADES 10-11-12

***INDUSTRIAL ACADEMY (see page 2)**

Mechanical and Electronics Engineering are emerging fields of engineering that integrate electrical engineering, mechanical engineering, computer science, control engineering and information technology. Mechatronics Engineering combines areas of engineering to allow the design, development and application of "smart devices" in an integrated, cross-disciplinary manner. Mechatronics is the science of intelligent systems where students learn to design, develop, fabricate, and test smart systems. Robotics is a good example of Mechatronics since it combines various mechanical parts such as arms, actuators, gears and wheels, with electronic components that control movement, and provide power. Subjects covered include electronics, VEX robotics, Bots IQ (BattleBots), robotic engineering, Parametric solid modeling using Solidworks Computer-Aided design software, modeling and simulation of mechatronics systems, sensors and actuators, engineering mathematics, machine component design, mechanical design, circuits and systems, control theory, programming, digital signal processing, and power engineering. Hands-on projects emphasize design of mechanical systems using embedded real-time computing including projects in robotics, automation and controls to include building and programming your very own robots.

<p>Units of Instruction Electronics Robotics Introduction to Engineering Solid Modeling Programmable Logic Controllers Introduction to Nanotechnology</p>	<p>Postsecondary Schools California University of PA Carnegie Mellon University IIT Technical Institute Johnson College *Westmoreland County Community College</p> <p>Industry Certifications Student Electronics Technician (SET)</p>	<p>Career Majors Robotics Engineer Mechanical Engineer Electro-Mechanical Technician Biomechatronics Technician Cybernetics Technicians</p>
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PLUMBING/HVAC – CIP 46.0503
FULL YEAR – 3 CREDITS GRADES 10-11-12
***INDUSTRIAL ACADEMY (see page 2)**

The Plumbing program is designed to prepare students for careers in the plumbing, heating, ventilation, and air conditioning industries. Throughout the program, students learn the basics of blueprint reading, layout and assembling, installing, altering and repairing of piping and plumbing fixtures. Design and installation of plumbing systems for both residential and commercial buildings are emphasized. Upon successful completion of the program, students are awarded the Pennsylvania Homebuilders Association Certificate.

***Students enrolled in this program rotate through the four construction programs during the first year.*

<p>Units of Instruction Residential Plumbing Layout & Design Rough-In Plumbing Blueprint Reading Hydronic Heating AC/Refrigeration Sheetmetal Layout Furnace Installation</p>	<p>Postsecondary Schools Triangle Tech *Westmoreland County Community College Thaddeus Stevens College of Technology</p> <p>Industry Certifications PA Builders Association Skills Certificate (PBA) Refrigerant Recovery Certification OSHA, CPR, AED First Aid</p>	<p>Career Majors Pipe Fitter Plumber Plumbing Inspection Steamfitter Boilermaker Utility Worker Heating, Ventilation & Air Conditioning Installer</p>
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WELDING TECHNOLOGY – CIP 48.0508
FULL YEAR – 3 CREDITS GRADES 10-11-12
***INDUSTRIAL ACADEMY (see page 2)**

Welding is a vital part of our society’s infrastructure. As a result, career opportunities in the welding field are endless and in-demand. Upon successful completion of this program, students will be ready for the challenges of this growing field. The Welding program teaches various methods to permanently fuse metals by applying intense heat and filler metal. Students will learn basic blueprint reading, metallurgy, safety, testing, fabrication, as well as inspection. Theoretical and practical study covers carbon steel, aluminum, stainless steel, and other materials. Curriculum includes instruction in oxy-fuel cutting, shielded metal arc, gas metal arc, flux-cored arc, and gas tungsten steel welding techniques. This program is certified by the American Welding Society.

<p>Units of Instruction Principles of Welding Manual Oxy-Fuel Gas Cutting Shielded Metal Arc Welding Gas Metal Arc Welding Flux-cored Arc Welding Gas Tungsten Arc Welding Plasma Arc Cutting Brazing and Soldering</p>	<p>Postsecondary Schools *Westmoreland County Community College Pennsylvania College of Technology Pennsylvania Highlands Community College</p> <p>Industry Certifications American Welding Society – D1.1 OSHA, CPR, AED First Aid</p>	<p>Career Majors Welding Engineer Welding Inspector Metal Fabricator Pipe Welder Steamfitter Underwater Welder Boilermaker</p>
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