

Ferndale Area Junior Senior High School 2023 – 2024

COURSE CATALOG

BUSINESS, COMPUTERS, INFORMATION AND TECHNOLOGY

Digital Arts
9-12th Grade

Elective

Semester
.5 credit

Designed for students with an interest in photo editing, color theory and illustration, this class gives students the opportunity to be digitally expressive. Students will learn graphic design principles, edit photos and design illustrations using Adobe Photoshop and Adobe Illustrator. This class utilizes a hands-on approach, incorporating real world ideas into course projects.

Communication Technology
9-12th Grade

Elective

Semester
.5 credit

Did you know that 63% of high school students use some type of technology every day. Ask yourself how well you are communicating on your devices. This class explores how to use technology to communicate and collaborate effectively online. Student will explore topics which include mobile learning, blog/vlogs, and other types of emerging technologies. We will discuss societal impacts and incorporate web-based programs as projects during the semester. Students will be able to apply these skills towards their educational and personal goals.

Cyber Security
10-12th Grade

Elective

Semester
.5 Credit

Malware is the most common breach of cyber security. Each year, there is an average of 10 million malware attacks in the United States. As a student, it is important to learn what happens to your information when you access the Internet. This course introduces students to the basics of cyber security. Topics we will cover include malware and malicious ads, safe gaming practices and potential career paths. Students will also discover defensive hacking techniques.

Small Business Management
10-12th Grade

Elective

Semester
.5 credit

This class introduces students to how to start a small business. The major project of the course will be the development of a Business Plan, which is required to start any small business. Throughout, and after, the creation of the Business Plan, topics covered include marketing and managing your business, licenses, codes, finances etc. At the end of the class, students will have created a professional business portfolio.

Game Design and Development
9-12th Grade

Elective

Semester
.5 credit

Resource limit: maximum of 15 students

The video game design course provides an opportunity for student to immerse themselves in the world of video game design and development. Students will explore conceptual and technical aspects of contemporary video game creation using various programs and editors. This class stems from various Curricular Frameworks and includes modules focused on game design theory, the major aspects of game creation including programming, art, production and design and exploration of the conceptual and technical implementation of elements within those domains. Students will begin by exploring the critical thinking behind game design theory, story, and game creation. Students will focus on key aspects of video game design, writing and implementing code in various editors, and implementing elements of art and production. As they use basic features to create an initial game. Students will explore constructs of game development such as level design, cameras, lighting, and audio, as they complete a capstone video game project. Student will peer review video games created by their classmates and use the iterative process to reflect on feedback provided on their own game and revise.

Over the course of the semester, students will be engaging in discussions around current trends in the game industry and the future of the field. There will be a strong focus on project management for technical projects such as video game creation. This course will require accurate and thorough documentation, including game design documents and a game developer's journal, as well as clear and consistent communications with classmates.

page includes the skills learned throughout the course. This is a good introductory semester course for any student who is interested in learning some basic HTML and the aesthetics behind the creation of a website.

ENGLISH

English 7
7th Grade

Required

Full Year

This course is designed to help students understand both the origins of the English language as well as stressing grammar, correct usage, and the mechanics of English. Students will integrate these language skills into the writing process by producing various writing samples including well-constructed sentences, effective paragraphs, and short essays. In addition, students will produce written works of various genres as outlined by the Pennsylvania Academic Standards. Student will also read and analyze at least one longer work of fiction.

Advanced English 7
7th Grade

Required

Full Year

Prerequisite: Advanced PSSA Scores

This course is designed to take an advanced approach to developing proficient communication skills through critical reading, writing, speaking, and listening, with an emphasis on all aspects of writing. Students will read, respond, analyze, and interpret a variety of literature, including, but not limited to, works of fiction, nonfiction, drama, and poetry. Students will demonstrate their in-depth comprehension and analytical skills through a variety of written genres and oral presentations.

This course will help prepare students for the more rigorous literature and writing required of students seeking placement in advanced college preparatory classes. It will aid in the development of creative and critical thinking, problem solving skills, and academic responsibility and initiative.

Reading 7
7th Grade

Required

Full Year

This seventh grade reading course is designed to introduce and reinforce vocabulary and comprehension skills. The skills presented are universal and apply in varying

degrees to all content area reading materials. Some major areas covered include: Identifying and applying meaning of vocabulary and word recognition skills (i.e. multiple-meaning words, synonyms, antonyms, using context clues and affixes). Students will read to understand fiction and non-fiction texts appropriate to grade level. Some major areas include: making inferences, drawing conclusions, comparing and contrasting, distinguishing between fact and opinion, identifying main ideas, facts and details, author's approach, predicting outcomes, summarizing, and critical thinking skills. Students are exposed to a wide variety of high-interest reading materials, tapes and movies to encourage a love of reading and life-long learning.

Advanced Reading 7
7th Grade

Required

Full Year

Prerequisite: Advanced PSSA scores

This course is designed to take an advanced approach while reinforcing vocabulary and comprehension skills. Some major areas covered include: Identifying and applying meaning of vocabulary and word recognition skills (i.e., multiple-meaning words, synonyms, antonyms, using context clues, and affixes). Students will read various literary genres like fiction, poetry, non-fiction, and historical fiction both independently and in class. Students will be exposed to advanced literature that will help them make connections to the world around them both in real life and in the classroom setting. This course will challenge students to think creatively and make real world connection through the upper level works that will be discussed in class. Students are exposed to a wide variety of high interest reading materials, tapes, and movies to encourage a love of reading and life-long learning.

This course will help prepare students for the more challenging works of literature which will serve as a foundation for upper-level courses at the high school and college level. It will aid in the development of creative and critical thinking, problem-solving skills, and academic responsibility and initiative.

English 8
8th Grade

Required

Full Year

This course is designed to help students understand grammar, correct usage, and the mechanics of the English language which will build on the previous year's skills. Students will then integrate these skills into the writing process by producing various writing samples including well-constructed sentences, effective paragraphs, and short essays. In addition, students will produce written works of various genres as outlined by the Pennsylvania Academic Standards. Students will read and analyze at least on longer work of fiction.

Advanced English 8
8th Grade

Required

Full Year

Prerequisite: Advanced PSSA scores; final average of 93% in English 7 or final average of 88% in Advanced English 7; teacher recommendation.

This course is designed to take an advanced approach to developing proficient communication skills through critical reading, writing, speaking, and listening, with an emphasis on all aspects of writing. Students will read, respond, analyze, and interpret a variety of literature, including, but not limited to, works of fiction, nonfiction, drama, and poetry. Students will demonstrate their in-depth comprehension and analytical skills through a variety of written genres and oral presentations.

This course will help prepare students for the more rigorous literature and writing required of students seeking placement in advanced college preparatory classes. It will aid in the development of creative and critical thinking, problem-solving skills, and academic responsibility and initiative.

Reading 8
8th Grade

Required

Full Year

This eighth grade reading course is designed to introduce and reinforce vocabulary and comprehension skills. The skills presented are universal and apply in varying degrees to all content area reading materials. Some major areas covered include: Identifying and applying meaning of vocabulary and word recognition skills (i.e. multiple-meaning words, synonyms, antonyms, using context clues, and affixes). Students will read to understand fiction and non-fiction texts appropriate to grade level. Some major areas include: making inferences, drawing conclusions, comparing and contrasting, distinguishing between fact and opinion, identifying main ideas, facts and details, author's approach, predictions outcomes, summarizing, and critical thinking skills. Students are exposed to a wide variety of high-interest reading materials, tapes and movies to encourage a love of reading and life-long learning.

Advanced Reading 8
Full Year 8th Grade

Required

Prerequisite: Advanced PSSA scores; final average of 93% in Reading 7 or final average of 88% in Advanced Reading 7; teacher recommendation.

This course is designed to take an advanced approach while reinforcing vocabulary and comprehension skills. Some major areas covered include: Identifying and applying meaning of vocabulary and word recognition skills (i.e., multiple-meaning words,

synonyms, antonyms, using context clues, and affixes). Students will read various literary genres like fiction, poetry, non-fiction, and historical fiction both independently and in class. Students will be exposed to advanced literature that will help them make connections to the world around them both in real life and in the classroom setting. This course will challenge students to think creatively and make real-world connection through the upper-level works that will be discussed in class. Students are exposed to a wide variety of high-interest reading materials, tapes and movies to encourage a love of reading and life-long learning.

This course will help prepare students for more challenging works of literature which will serve as a foundation for upper-level courses at the high school and college level. It will aid in the development of creative and critical thinking, problem-solving skills, and academic responsibility and initiative.

English 9
9th Grade

Required

Full Year
1 credit

English 9 builds upon the skills learned in English 8. Students will study all aspects of the language arts – reading, writing, speaking, and listening -as outlined in the Pennsylvania State Standards. Effective composition writing is practiced. Literature study will include reading and discussion of both fiction and nonfiction and will feature selected short stories, articles, drama, and poetry. Students will begin the process of preparing the Pennsylvania Keystone Exam for Literature, which will be taken upon the completion of English 10.

Honors English 9
9th Grade

Required

Full Year
1 credit

Weighted course

Prerequisites: Advanced PSSA scores; final average of 93% in English 8 or 88% in Honors English 8; teacher recommendation

Honors English 9 builds upon the skills learned in Honors English 8. Students will study all aspects of the language arts – reading, writing, speaking, and listening – as outlined in the Pennsylvania State Standards. Effective composition and research writing is practiced. Literature study will include reading and discussion of both fiction and nonfiction and will feature selected short stories, articles, drama, poetry, and novels. Student will begin the process of preparing for the Pennsylvania Keystone Exam for Literature, which will be taken upon the completion of English 10.

This course will help prepare students for the more rigorous literature and writing required of students seeking placement in AP courses. It will aid in the development of

creative and critical thinking, problem-solving skills, and academic responsibility and initiative. This course will exceed content at a fast pace and will require independent study and completion of assignments regularly.

English 10
10th Grade

Required

Full Year
1 credit

English 10 builds upon the skills developed in English 9. Students will study all aspects of the language arts – reading, writing, speaking, and listening – as outlined in the Pennsylvania State Standards. Students will practice and refine these skills through a variety of activities, assignments, and projects. Effective composition writing is practiced and refined. Literary forms and their characteristics are studied. These include both fiction and nonfiction selections, poetry, drama, and a novel. At the end of the course, students will take the Pennsylvania Keystone Exam for Literature.

Honors English 10
10th Grade

Required

Full Year
1 credit

Weighted course

Prerequisites: Final average of 93% in English 9 or 88% in Honors English 9; teacher recommendation.

Honors English 10 builds upon the skills developed in Honors English 9. Students will study all aspects of the language arts – reading, writing, speaking, and listening – as outlined in the PA state standards. Students will practice and refine these skills through a variety of activities, assignments, and projects. Advanced composition and research writing is practiced and refined. Effective public speaking is also refined. Literary forms and their characteristics are studied. These include both fiction and non-fiction selections, poetry, drama, and novels. At the end of the course, students will take the Pennsylvania Keystone Exam for Literature.

This course will help prepare students for the more rigorous literature and writing required of students seeking placement in the AP courses. It will aid in the development of creative and critical thinking, problem-solving skills, and academic responsibility and initiative. This course will exceed content at a fast pace and will require independent study and completion of assignments regularly.

English 11
11th Grade

Required

Full Year
1 credit

English 11 is designed to give students an opportunity to practice and develop their language arts skills, while focusing on the areas of comprehension and writing as well as to introduce students to different genres of literature. The course will stress Keystone Test practice, organizational strategies, and the necessity of using textual details as support when writing an argument, opinion, or a formal essay. This will help students prepare for successfully taking the Keystone Literature Exam or the Local Assessment in order to meet graduation requirements. Course content is determined by the unique and individual needs of the students enrolled in the class.

Honors English 11
11th Grade

Required

Full Year
1 credit

Weighted course

Prerequisite: Final average of 93% in English 10 or 83% in Honors English 10; Teacher Recommendation.

Students in Honors English 11 will also study American authors, with the first semester focusing on literature from the Puritan period to the Romanticism and the second semester focusing primarily on three 20th century novelists (Betty Smith, John Steinbeck, and F. Scott Fitzgerald). These students will strive to find deeper meaning in the literature by studying the authors and the historical period in which they lived and by making thematic connections between texts.

Because this course is designed for those who are college-bound, students will be expected to read independently each night, complete research responsibly, and write formally. To strengthen their written expression, students will also be exposed to usage and wordiness rules and grammar and punctuation rules as necessary.

English 12
12th Grade

Required

Full Year
1 credit

English 12 will provide students with the opportunity to strengthen their reading, writing, speaking, and listening skills. Throughout the first semester students will review basic grammar, punctuation and usage rules and work to strengthen their sentence structure and paragraph form.

Students will also be expected to read and respond to high-interest literature, both fiction and nonfiction. The class will require students to complete some reading outside the classroom; however, class time will also be provided so that students can listen to

selections and seek assistance when necessary. At times students will be required to complete teacher-guided research assignments that are connected to the literature they are reading.

Honors English 12 12 th Grade Weighted course Prerequisite: Honors English 11 and Teacher Recommendation	Required	Full Year 1 credit
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Honors English 12 is designed for those who are college-bound. It involves literature study and is thematic by semester, with the first semester focusing on British literature (Anglo-Saxon through Renaissance). Throughout the year various forms of writing are also stressed, including the informative research paper, personal reactions to literature, and literary criticisms. In addition to the increasingly complex literature study, various assignments are given to help the students fine tune their writing skills and develop their own style and voice.

AP English Literature & Composition 12 th Grade Weighted course	Required	Full Year 1.2 credit
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Prerequisite: A final average of 80% or higher in AP English Language and Composition, as well as teacher recommendation. If a student would like to take AP English Literature & Composition but is not currently on the Honors/AP track, he/she must have a 95% or higher, as well as teacher recommendation. Satisfactory completion of a summer assignment is required and due on the first day of school for this course.

The AP English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. Students who sign up to take the AP Exam but decide not to take it once it is ordered will be required to reimburse the district for the test. This may include a penalty fee if the student decides not to take the exam once ordered.

Creative Writing
9-12th Grade

Elective

Semester
.5 credit

Creative Writing is intended to help writers achieve a more advanced level of composition writing skills. Students will utilize a variety of genres and forms to improve their skills in focus, content, organization, style, and mechanics. Particular emphasis will be placed on improving content and style. Much of the class will feature a writing workshop format while taking a more creative approach. Students will write both fiction and nonfiction pieces, poetry, plays, and independent projects. Students interested in writing as a profession or students who enjoy writing should schedule this course.

Public Speaking
9th Grade

Elective

Semester
.5 credit

The goal of this course is for students to learn the process of oral communication, which includes speaking before a group or interviewing for a job. Students will create outlines for their Persuasive, Informative, and Commemorative speeches, and conduct the necessary research in order to provide relevant support for their message(s). Students will learn that plagiarism is a serious offense in and out of school. They will also have some fun with Impromptu speaking. This course follows the Modern Language Association's guidelines for writing.

College Grammar
11-12th Grade

Elective

Semester
.5 credit

The goal of this course is to ensure that students have control of their writing by understanding and adhering to the rules that govern writing. In this class, students will learn to strengthen their sentences by learning to vary their sentence patterns. While learning to subordinate, they will also learn to punctuate the sentences correctly and avoid the errors frowned upon in college writing: dangling and misplaced modifiers, faulty parallelism, unnecessary use of passive voice, and generally used pronouns. Students will use the college textbook English Fundamentals and its corresponding website.

FAMILY AND CONSUMER SCIENCES

Family and Consumer Sciences
7th Grade

Cycle Courses

Quarter

This hands-on course introduces students to the Family and Consumer Sciences curriculum. The areas of concentration include Financial and Resource Management, Balancing Family, Work and Community Resources, Food Science and Nutrition, and Child Development.

Basic Foods and Nutrition
9-12th Grade

Elective

Semester
.5 credit

In this course, students will build a solid foundation in Food Science and Nutrition while obtaining fundamental skills for everyday life. Students will explore scientific and technical developments that enhance our food supply, identify common causes and prevention of food borne illnesses, analyze nutritional requirements, and eating disorders.

Advanced Foods and Nutrition
9-12th Grade

Elective

Semester
.5 credit

In this course, students will build a solid foundation in Food Science and Nutrition while obtaining fundamental skills for everyday life. Students will explore scientific and technical developments that enhance our food supply, identify common causes and prevention of food borne illnesses, analyze nutritional requirements, and eating disorders.

Advanced Food and Nutrition
9-12th Grade

Elective

Semester
.5 credit

Prerequisite: Basic Food and Nutrition

In this course, students will build on the foundation of Basic Foods. While creating interesting recipes from around the globe, student will analyze current and future food trends, evaluate government agencies that safeguard food production and preparation, investigate MyPlate.gov, and consider scientific principles used in food processing, preparation and packaging.

Child Development
9-12th Grade

Elective

Semester
.5 credit

In this course, students will analyze the physical, intellectual, emotional and social development of children from conception to age 2. In addition, students will examine

the impact of child theorists, health and safety, learning environments and quality children's literature. Students will participate in the Baby Think it Over and The Empathy Belly simulations.

Independent Living 10-12 th Grade	Grad. Requirement	Semester .5 credit
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While relating careers to individual interests, aptitudes and abilities student will explore careers and career paths. They will apply research skills developing a career portfolio and scrutinizing their personal career goals and preparation opportunities. Students will read and reflect on *The 7 Habits of Highly Effective Teens* by Sean Covey and evaluate their personal attitudes and work habits, while establishing positive practices in their lives.

Interior Design 9-12 th Grade	Elective	Semester .5 credit
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This is an introductory course in Interior Design. Students will be introduced to and apply several basic components of Interior Design including elements and principles of design in interior design, architectural styles, furniture styles, and arrangement. The creation of floor plans and design boards will be emphasized.

Baking 9-12 th Grade Prerequisite: Basic Foods and Nutrition	Elective	Semester .5 credit
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In this course, students will learn the classic methods and techniques that are used in the preparation of finished baked good, gain an understanding of the various mixing methods and the effects on batters and doughs. Students will accurately measure ingredients, understand complex recipe techniques and conversions, and the art of presentation.

FINE ARTS

Art 7 7 th Grade	Cycle Course	Quarter
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This class is an introduction course to the elements of art. Explore different mediums including paint, clay, and drawing. Students create and utilize sketchbooks for designing and brainstorming projects.

Art Explorations 9-12 th Grade	Elective	Semester .5 credit
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This is an art class designed for students who want to do a little bit of everything in art. It will allow students to explore 2D and 3D art if they are unsure which they prefer or if they just want to try something new. Students of all levels are welcome to join. We will explore fundamental drawing, paint, and sculpture techniques. Students will also learn about multiple artists and art movements throughout their time in this course.

3-D Art 9-12 th Grade	Elective	Semester .5 credit
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This course is designed for students who want to try something other than drawing and painting. Students will use 3D art materials to help them create in a new way. We will explore multiple principles and elements of art within each project. It is recommended that students take art explorations first to build the skill set for more complex projects, but it is not required.

Drawing and Painting 9-12 th Grade	Elective	Semester .5 credit
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Teacher Recommendation if you have not taken Art Explorations

This course is designed for students who only like to work with 2D mediums to create art. This class will be designed for students to learn multiple drawing and painting skills as we focus on the elements and principles of art. It is recommended that students take art explorations first to build the skill set for more complex projects, but it is not required.

Independent Art 11-12 th Grade	Elective	Semester .5 credit
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Prerequisite of level 2 – 3D Art (3DII) and teacher recommendation.

This course is for juniors and seniors that have completed up to the second level of drawing and painting (2DII) or 3D art. This course is going to be an independent art

class to prepare students for art making after high school. Students do not have to plan to pursue a career in the art field to be in this course, but they will learn about different career paths along with building a professional art portfolio. Students will be given prompts and will have the leisure to choose art mediums they want to use for each project.

FOREIGN LANGUAGES

Foreign Language Expo 7 th Grade	Cycle Course	Quarter
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This **exploratory** class is designed to help you ease into second-language learning. When you begin to study French or Spanish in 8th or 9th grade, you will have the basic skills needed to be successful. This course will run for nine weeks and places more emphasis on learning vocabulary in context as well as culture and less emphasis on grammar.

French I 9-12 th Grade	Full Year 1 credit
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The objective of French I is for the student to achieve basic proficiency in the four skills of listening, speaking, reading and writing. Language is presented within context to the contemporary French-speaking world and its culture. Basic grammar skills and vocabulary are taught. Videos, depicting the youth of France, and audio CDs of native speakers are used. Conversation and instruction in French will increase as the year progresses.

French II 10-12 th Grade	Full Year 1 credit
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Prerequisite: C or better average in French

French II continues the work started in French I. Vocabulary is greatly expanded, and more difficult grammar structures are introduced. The video and audio programs support the text content. Games, written/oral activities, and dialogues are used for practice. French is used for conversation and instruction as much as possible.

French III 11-12 th Grade	Elective	Full Year 1 credit
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Recommendation: B or better average in English

French III is an advanced course which increases the communication skills of the student and builds the ease and confidence with which he or she uses French for self-expression. French novels and short stories are sometimes used to introduce more complex grammatical structures. Conversational situations and grammatical points will be based on previous years and build on past knowledge.

French IV/V 12 th Grade Weighted course	Elective	Full Year 1 credit
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Prerequisite: B or better average in French III
Recommendation: B or better average in English

French IV is an advanced course which increases the communication skills of the student and builds the ease and confidence with which he or she uses French for self-expression. French novels and short stories are sometimes used to introduce more complex grammatical structures. More cultural materials and grammar are provided throughout the year. Conversational situations and grammatical points will be based on previous years and build on past knowledge. Students who wish to develop further oral competence may select this advanced course.

Spanish I 9 th Grade	Full Year 1 credit
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The objective of Spanish I is for the student to achieve basic proficiency in the four skills of listening, speaking, reading, and writing. Language is presented within context of the contemporary Spanish-speaking world and its culture, which includes Spain and Latin America. Basic grammar skills and vocabulary are taught. Authentic, current videos and audio of native Spanish-speakers are integrated into the course. Conversation and instruction in Spanish will increase as the year progresses.

Spanish II 10-12 th Grade	Full Year 1 credit
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Prerequisite: Average of a C or above in Spanish I

Spanish II continues the progress made by the student in the first year of language study. Grammatical structures advance and vocabulary expands substantially. Emphasis is placed on speaking and reading in addition to the student learning to write more proficiently in the language. A variety of apps, websites, interpersonal activities and games are used to acquire the language. Spanish is used for conversation and instruction when possible.

Spanish III 11-12 th Grade	Elective	Full Year 1 credit
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Prerequisite: an average of an A or B in Spanish II

Recommendation: an average of an A or B in English the year prior.

Spanish III is an advanced course for students who wish to develop further communicative competence. Students are taught more advanced grammatical structures and verb tenses and given more opportunities to improve their writing and reading skills. Students in level III also read, interpret and re-tell short stories in Spanish.

Spanish IV 11-12 th Grade	Elective	Full Year
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Weighted course

Prerequisite: an average of an A or B in Spanish III

Recommendation: an average of an A or B in English the year prior

Spanish IV is for those who have completed level III with a B or higher and who wish to develop further oral, written and comprehension competence. In this course, students continue to learn advanced grammar concepts, a wider scope of vocabulary and are provided with more opportunities to interpret authentic spoken language. In this level, students read and interpret authentic Latin American Literature.

Spanish V 12 th Grade	Elective	Full Year 1 credit
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Weighted course

Prerequisite: B or better average in Spanish IV

Recommendation: B or better average in English

Students in Spanish V will use all grammar concepts taught in levels I-IV and will continue to be more advanced vocabulary and synonyms for previous vocabulary. This course is supplemented with advanced level textbooks and exercise to prepare the student for post-secondary Spanish education.

Health, Physical Education, and Driver's Education

Health 8 8 th Grade	Required	9 weeks
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The eighth-grade health program is designed to allow students the opportunity to learn and practice aspects of overall health. Total health includes mental, emotional, social, and physical health. Students study the body and how it functions. They discuss issues regarding values, positive attitudes, acceptance, and tolerance, and apply these to daily situations. Students are challenged to think independently and to take responsibility for their health. They learn to identify good health habits and are encouraged to promote healthy lifestyle choices.

Health 9 9 th Grade	Required	Semester .5 credit
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The ninth-grade health program is designed to allow students the opportunity to learn information in such a way that it influences them to take positive actions regarding their own health. The students will be exposed to various health topics throughout the program including overall wellness, character building, health and your body, health and your mind, protecting your health in a drug-oriented society, family life, sexuality and social health, diseases and disorders, and safety and emergency issues.

Physical Education 8 th Grade 9-12 th Grade	Required	Quarter Semester 1 credit
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The physical education program is designed to assist students in developing the following physical qualities: strength, endurance, cardiovascular fitness, and flexibility. Other characteristics such as respect, sportsmanship, cooperation, and acceptance of different abilities will be demonstrated daily in a positive instructional environment.

Students will understand the importance of being both mentally and physically fit and will be encouraged to make healthy choices and maintain an active lifestyle.

Competitive Team Sports 10-12 th Grade	Elective	Semester .5 credit
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The physical education program is designed to assist students in developing the following physical qualities; strength , endurance, cardiovascular fitness, and flexibility. Other characteristics such as respect, sportsmanship, cooperation, and acceptance of different abilities will be demonstrated daily in a positive instructional environment. Students will understand the importance of being both mentally and physically fit and will be encouraged to make healthy choices and maintain an active lifestyle. Additionally, this course is designed to emphasize teamwork and cooperation as well as hone advanced level athletic skills and talents.

National Archery in the School's Program 9-12 th Grade	Elective	Semester .5 credit
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This is a basic archery course that focuses on beginning archery safety, skills, and drills. Participants learn about archery form, range rules and etiquette. Form training and fun games are introduced in this class. This class also focuses on a continued education towards tournament styles of shooting used by many archery tournament associations from around the world. Along with the tournament lesson, participants receive continued knowledge around their shooting form and advice on personal equipment selections.

Driver's Education 10 th Grade	Suggested	Semester .5
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Tenth grade students are encouraged to partake in the Driver's Education course. Emphasis will be placed on traffic laws and safety, principles of automobile management and driver responsibilities. Instruction includes care and upkeep of the automobile. Content and performance expectations for driver education include: PA laws and regulations, knowledge of vehicle operations, perceptual skills development, decision making and risk reduction, driving conditions and the influences upon driver performance.

MATHEMATICS

Math 7 7 th Grade	Required	Full Year
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The focus areas of instruction in Math 7 are Numbers and Operations; Algebraic Concepts; Geometry; and Measurement, Data and Probability. Students spend the majority of the year learning how to solve problems involving rational numbers, including with ratios, proportions, percentages, equations, and inequalities. They apply these concepts and skills when learning about circles, angle measure, area, surface area, volume, random sampling, data distributions, and probability. Students in this course will take the Math 7 PSSA.

Pre-Algebra 7-8 th Grade	Required	Full Year
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Prerequisite: Advanced 6th Grade Math or Math 7

Pre-Algebra reintroduces the students to previously learned concepts/ideas on an algebraic level. Students begin with evaluating and writing algebraic expressions using integers. Using integer sets, students will find measures of central tendencies. They are also exposed to powers and exponents using the properties of numbers. Students continue working with expressions by writing and solving one-step and two-step equations and inequalities. Students then work with graphing points and equations in the coordinate plane. With these graphs, students will solve problems and linear systems. Next, the students expand their knowledge of fractions by comparing, ordering, and simplifying fractions. Students will then explore square roots and irrational numbers. The students are then reintroduced to ratios, rates, and proportions. Students will use these concepts to solve problems involving similar polygons, scale models and indirect measurements. Students apply their knowledge of percentages to solve proportions and estimation problems. Also, they will apply these concepts to real world applications. Time permitting; students will be introduced to different concepts involving exponents and powers, geometry, using graphs to analyze data, probability, and algebraic relationships.

Algebra I Honors 8 th Grade	Elective	Full Year 1 credit
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Prerequisite: Pre-Algebra with 85% average and Proficient or Advanced on Math 7 PSSA and Teacher Recommendation

The course includes a review of integer arithmetic, distribution, and multi-step equations and inequalities. Students write equations of lines, graph linear equations and inequalities, write and solve systems of equations and inequalities including word problems. Students solve absolute value equations and inequalities. Students use function notation, evaluate functions, identify functions, and find domain and range. Students estimate and simplify irrational expressions. Students perform arithmetic operations on polynomials and factor quadratics.

Algebra IA 8-9 th Grade Prerequisite: Pre-Algebra	Required	Full Year 1 credit
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Algebra 1A is the first half of a two-year sequence which will culminate in taking the Keystone Algebra 1 exam. Algebra 1A, therefore, consists mostly of topics learned in grades 6-8 while adding a level of depth appropriate for high school. In this course, students will learn about the real number system, multi-step equations and inequalities, linear equations and inequalities, functions, and one- and two- variable statistics.

Algebra IB 8-11 Grade	Required	Full Year 1 credit
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This course is a continuation of Algebra 1A. Students in Algebra 1B begin the year where they left off in the previous course, extending their work on statistics into the field of probability. They will then use their Algebra 1A skills with equations and inequalities to learn about systems of linear equations and inequalities as well as absolute value equations and compound inequalities. Students wrap up new content by learning about radicals, exponents, and polynomial operations. The course concludes with a review of all Algebra 1 concepts and skills to prepare for the Keystone Algebra Math Assessment.

Geometry 9-11 th Grade Weighted course Prerequisite: Algebra I with 90% average	Required	Full Year 1 credit
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Geometry is a formal mathematical system based on definitions and assumptions. Its purpose is to build the system through proven theorems and to show how the system is applied to specific problems. It develops the students' ideas of plane and spatial relations, their knowledge of various geometric figures, their concepts of formal mathematical proofs, and their ability to reason deductively. The course begins with

basic Geometric definitions, transformations, reasoning, and problem solving. Next, students study triangles and other polygons, focusing on properties, congruence, and measurement. Then, students learn basic trigonometry and properties of parts associated with circles. The course concludes with surface area and volume of solids. Extra attention will be placed on proofs, constructions, and Mathematical modeling.

Algebra II Honors 10-11 th Grade	Required	Full Year 1 credit
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Weighted course

Prerequisite: Algebra I and Geometry average grade of 90% or better and Proficient or Advanced score on Keystone Algebra I

In Algebra 2 Honors, we begin the year with a quick review of some Algebra 1 concepts including solving, writing, and graphing linear equations and inequalities. Solving systems of equations and inequalities is the next topic, which will include solving three variable systems. Then we will introduce the concept of matrices and how they can be used for problem solving in different situations. We also discuss methods to graph and solve quadratic functions. The next topic will discuss simplifying polynomials and solving polynomial equations using different methods including factoring and finding possible rational zeros. Powers, roots, and solving radical equations is followed by simplifying rational expressions and complex fractions. Some extra topics are covered if time permits to further prepare the students for Advanced Algebra/Trigonometry.

Algebra II Honors 10-11 th Grade	Required	Full Year 1 credit
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Weighted course

Prerequisite: Algebra I and Geometry average grade of 90% or better and Proficient or Advanced score on Keystone Algebra I

In Algebra 2 Honors, we begin the year with a quick review of some Algebra I concepts including solving, writing, and graphing linear equations and inequalities. Solving systems of equations and inequalities is the next topic, which will include solving three variable systems. Then we will introduce the concept of matrices and how they can be used for problem solving in different situations. We also discuss methods to graph and solve quadratic functions. The next topic will discuss simplifying polynomials and solving polynomial equations using different methods including factoring and finding possible rational zeros. Powers, roots and solving radical equations is followed by simplifying rational expressions and complex fractions. We will then learn the concepts of direct, inverse, and joint variation and how this can be applied to various problems. More emphasis will be placed on application problems in Algebra 2 Honors including

personal finance should progress to this course after Algebra I, Algebra II, and Geometry. Personal finance will review basic math skills and concepts and apply them to everyday mathematical situations. Topics discussed include checking and savings accounts, paying bills, APR and amortization tables (bankrate.com), insurance, taxes, credit cards, credit reports, credit scores, identity theft, and retirement.

C++ Programming
12th Grade
Elective
Semester
.5 credit
Prerequisite: Advanced Algebra and Trigonometry and Teacher Recommendation

This course begins with an introduction to computer languages in general and C++ specifically. Students learn programming style, programming techniques, and debugging strategies. Emphasis is placed on application, with the majority of class time spent at the computers writing programs. Topics covered include loops, functions, and arrays.

Probability and Statistics
11-12th Grade
Elective
Semester
.5 credit
Dual Enrollment
Prerequisite: Algebra II and Teacher Recommendation

This is a course for college-bound seniors. The course begins with an introduction to statistics and their use in a variety of fields. Next is a discussion of how to describe data graphically and how to analyze data numerically. Probability and the rules of probability are discussed in detail. The course continues with the normal distribution, sampling, and other topics in inferential statistics including estimation, hypothesis testing, linear correlation and regression. Emphasis is placed on written analysis and interpretation of mathematical findings.

Music

General Music
8th Grade
Cycle Course
9 weeks

This course is designed to give students an introduction to the many different styles of music. It will allow students to experience classical pieces of music and follow music's

development over many centuries. It will also dive into the worlds of marching band, pop/rock, and musical theater.

This course will also provide students the opportunity to create music no matter their musical background. Students will use a number of IPAD apps, programs and pieces of technology to aid them in writing, creating and recording their own music. Students will learn different songwriting techniques and song forms.

Band (Marching and Concert)
7-12th grade

Elective

Full Year
1 credit

Marching Band is an elective course for students in grades 7-12. This course formally begins with summer band camp in August. Additional time beyond the five periods per week is required of students electing this course, including football games and parades and rehearsals. In compromise with marching band activity, good music performed will give the participating band member practical experience in cooperation, discipline, and pride of membership in the organization. Active participation in the marching band will develop physical, mental, emotional, and social attributes. In addition to the educational values of the program, we cannot forget that it is one of the most influential public relations outreaches of the music program and the school.

Concert Band is an elective course for students in grades 7-12. Additional time beyond the five periods per week is required of students selecting this course, including concerts and rehearsals. The concert band is judged by the audience through its performance; however, the time spent in preparing the concert would be wasted if all the action was spent on audience appeal and nothing else. In the concert band, as in the marching band, music is the justification. The concert band is not segregated from the marching band but a continuation of music experiences is gained through it. Students sign up to participate for the year. Band rehearsals give the member a chance to continue to develop his/her understanding of music through participation.

Junior High Chorus
7-8th Grade (Homeroom)

Elective

Full Year

This is an elective course for students in grades 7-8 and is scheduled for the year. The course consists of the study and performance of various styles of choral music. Sight reading, pitch matching and vocal production will be focused on. The course is a performance based class as those students enrolled will perform for school and/or community functions.

Chorus
9-12th Grade

Elective

Semester
.5 credit

This is an elective course for students in grades 9-12 and is scheduled for the year. The course consists of the study and performance of various styles of chorale music. Sight reading, pitch matching and vocal production will be focused on. The course is a performance based class as those students enrolled will perform for school and/or community functions.

Music Appreciation
9-12th Grade

Elective

Semester
.5 credit

This is an elective course for students in grades 9-12 and is scheduled for the year. The course consists of the study and performance of various styles of chorale music. Sight reading, pitch matching and vocal production will be focused on. The course is a performance based class as those students enrolled will perform for school and/or community functions.

The general timeline will be followed: Music of the 19th & 20th Century, Country, Soul, Rise of Rock (60's), Social Dance & Jazz, Rock Music & Popular Mainstream (70's), Tin Pan Alley, Reggae, Punk, Funk & Disco(70's), The Swing Era, Digital Technology & MTV (80's), Rock & Roll (1954-1959), Hip-Hop, Alternative & Today (90's), American Pop & British Invasion (60's).

Science

Integrated Science 7
7th Grade

Required

Full Year

Integrated Science 7 is a continuation of the science modules studied in sixth grade science, but students will take on the roles of scientists and engineers to figure out real-world phenomena. By combining disciplinary core ideas with crosscutting concepts, students will actively investigate compelling Life Science, Earth & Space Science and Physical Science questions. Students are asked to formulate convincing scientific arguments after making sense of evidence collected from a variety of sources.

Integrated Science 8
8th Grade

Required

Full Year

A large portion of Integrated Science 8 is dedicated to understanding the scientific method, measurement, laboratory skills and tools, along with technological design and its societal impact. Students will design solutions for real-world problems that require them to figure out how to help those in need through the application of engineering and design practices. The course also prepares students to take the Grade 8 Science PSSA in the spring.

Ecology
9th Grade

Required

Full Year
1 credit

Ecology is the study of how organisms interact with each other and their environment at population, community, and ecosystem levels. The goal of this course is to familiarize students with ecological theory and its applications.

Biology
*9 or 10th Grade

Required

Full Year
1 credit

*9th grade students must have a teacher recommendation based upon classroom performance and diagnostic tools data.

Biology is designed to provide a comprehensive review of ecological and biological principles. The course focuses on the chemical basis for life, bioenergetics, homeostasis and cell transport, cell growth and reproduction, genetics, the theory of biological evolution, and ecology. Additionally, this course rigorously prepares student for the Biology Keystone in the spring.

Environmental Chemistry
10-12th Grade
Prerequisite: Biology

Elective

Full Year
1 credit

The focus of Environmental Chemistry is to introduce students to the foundations of general chemistry and the effect chemicals have on the natural environment and human health. Students will have an opportunity to learn and engage with environmental issues and concerns in the context of scientific studies and chemistry contexts. This course will cover the fundamental concepts of general chemistry, such as the scientific method, atoms, elements and trends of the periodic table, compounds, nomenclature, and chemical reactions. It will also cover topics such as climate science, water pollution and treatment, and waste management and recycling. Students will learn skills such as

critical thinking, problem solving, long term planning and decision making, risk-benefit assessment, organizational skills, and writing skills. They will also explore how environmental scientists use and apply their knowledge with the workforce.

Chemistry
10-12th Grade

Elective

Full Year
1 credit

Prerequisite: Biology and a final average of 75% or better in Algebra I

Chemistry is designed to give an overview of all chemistry concepts. The content covered includes the scientific method, scientific measurement, matter, atomic theory, bonding, and chemical reactions. To be successful in chemistry, students must take the concepts learned in class and apply them in the lab. Therefore, students will be required to properly identify and use laboratory equipment to conduct numerous experiments relating to the concepts. Some topics covered require extensive mathematical problem-solving skills. A basic knowledge of algebra is a necessity.

Chemistry II
11-12th Grade

Elective

Full Year
1.4 credit

Weighted course

Prerequisite: 85% or better in Chemistry, previously passed or concurrent with Trigonometry, and Teacher Recommendation

Chemistry II is offered during the odd years.

Chemistry II course is designed to provide students with the foundation of chemistry content and laboratory skills necessary for a general chemistry college course. There is also a more intensive use of math with Chemistry II. The Chemistry II laboratory section will prepare students to use similar procedures in college. Therefore, students will be required to write college level lab reports for this course.

Human Anatomy and Physiology
10-12th Grade

Elective

Full Year
1.4 credit

Weighted course

Prerequisite: 80% average or better in Biology and Teacher Recommendation

Human Anatomy and Physiology is an advanced biology course specifically designed for students who plan on attending an institution of high learning to become health related professionals. The course studies the structure, function, and location of human body tissues and human body systems. Dissections include the cow eye, sheep brain, mammalian heart, mammalian kidney, Southern Leopard frog, and the fetal pig.

Physics 11-12 th Grade	Elective	Full Year 1 credit
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Weighted course

Prerequisites: 80% in Algebra II and Teacher Recommendation Physics is offered during the even years

Physics offers students a general preparation in physics. While the appropriate use of mathematics is employed to most efficiently describe natural phenomena, a considerable effort is made to apply physical principles to everyday phenomena. In this way, the course serves a dual role in that it will prepare students for a more mathematically intensive college physics course while making the principles learned more meaningful and useful in everyday life.

Forensic Science 12 th Grade	Elective	Full Year 1 credit
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Prerequisite: Biology

Forensic Science will engage students in a laboratory based science class designed for students who are interested in the application of science for solving crimes. The purpose of this course is for students to gain experience in the major investigative techniques currently used by forensic scientists and crime scene investigators, and to develop an understanding of the scientific concepts which serve as the basis for these techniques.

SOCIAL STUDIES

PA & World 7 th Grade	Required	Full Year
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For the first semester, we will focus on the history and geography of Pennsylvania. The second semester of this course will provide students with knowledge about the physical, cultural, and human geography of the world (especially the Western World that is not

covered as much in elementary school). Through this course, students will enhance their understanding of the locations of the world's regions. This course will provide instruction and practice to students in order to improve their basic map skills.

Colonial History & The Constitution
8th Grade

Required

Full Year

In Colonial History, students will study the beginnings of colonial life up to the end of the Revolutionary War. In this course we will focus on the development of the 13 English colonies and beginning of an American Identity.

For the second semester, we will pick up with our founding fathers creating a government for the Americans as they gain their independence from England. Topics covered will include: What does it mean to be an American citizen; the foundations of American government; The Constitution (including amendments); and the 3 branches of our federal government.

Advanced Colonial History & The Constitution
8th Grade

Required

Full Year

Prerequisites: 90% average or better in 7th grade social studies class and teacher recommendation

In Colonial History, students will study the beginnings of colonial life up to the end of the Revolutionary War. In this course we will focus on the development of the 13 English colonies and beginning of an American Identity.

For the second semester, we will pick up with our founding fathers creating a government for the Americans as they gain their independence from England. Topics covered will include: What does it mean to be an American citizen; the foundations of American government; an in depth study of the Constitution (including amendments); and the 3 branches of our federal government.

Although the topics are the same as the other 8th grade classes, the advanced course offers more opportunity for students to develop the critical skills of analysis, synthesis, and evaluation in a more rigorous and reflective academic setting. Students are asked "why?" more in this class and will have to show an understanding of different viewpoints. The advanced class will examine more primary and secondary source documents and will have to demonstrate their knowledge with short answer, essay, and document based questions.

World History
9th Grade

Required

Full Year
1 credit

World History focuses on the people, places, governments and technologies from 1500 to the present. Topics covered include: Religions of the World, the Formation of Western Europe, Renaissance and Reformation, Absolute Monarchs, The Enlightenment, Nationalist Revolution Movements, World War II and the Restructuring of the Post War World.

United States History I
10th Grade

Required

Full Year
1 credit

United States History I explores American history from the signing of the Constitution to the Industrial Revolution of the late 1800's and early 1900's. In addition to historical events, there will be an emphasis on economics which includes the study of interest rates, the value of money, inflation, deflation, bottlenecks in production, as well as basic supply and demand relationships.

United States History 2
11th Grade

Required

Full Year
1 credit

United States History 2 will focus on the people, places, conflicts and changes from the Progressive Era to the Present Day. Topics covered will include; Progressive Movement, Imperialism, World War I, The depression, the New Deal, World War II, The Cold War, Civil Rights Movement, Vietnam, The Fall of Communism, and Terrorism.

American Government
12th Grade

Required

Full Year
1 credit

Weighted course (with Dual Enrollment)

In American Government students will complete an in depth study of the structure of government in the United States while comparing and contrasting this structure with other systems. This will include a detailed study of the Constitution. Time will be spent on how a bill becomes law, taxation on the federal and state level, interest groups, political parties, voting behavior, political labels, and the discussion of Supreme Court rulings. Current events will also be discussed with an emphasis on recognizing bias and propaganda. Students will be required to attend one school board meeting and one township meeting. Through the completion of the course, students will gain an awareness of their personal politics along with their rights and responsibilities as citizens.

Psychology 12 th Grade	Elective	Semester .5 credit
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Prerequisite: 3.0 or above in High School Social Studies classes Penn Highlands Dual Enrollment Option

The AP U.S. History course is designed to provide students with the analytic skills and factual knowledge necessary to deal critically with the problems and materials in U.S. history. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full year introductory college courses. Students should learn to assess historical materials – their relevance to a given interpretive problem, reliability, and importance – and to weigh the evidence and interpretations presented in historical scholarship. An AP U.S. history course should thus develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format. Students who plan on taking the Advanced Placement exam in May are responsible for all costs related to taking the exam. This includes a penalty fee if the student decides not to take the exam once ordered.

AP U.S. Government and Politics 11-12 th Grade Weighted Course	Elective	Full Year 1.2 credit
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Prerequisite: Top 12 students in previous year's Social Studies Class and teacher recommendation

AP U.S. Government and Politics provides a college level, nonpartisan introduction to key political concepts, ideas, institutions, policies, interaction, roles, and behaviors that characterize the constitutional system and political culture of the United States. Students will study U.S. foundational documents, Supreme Court decisions, and other texts and visuals to gain an understanding of the relationships and interactions among political institutions, processes, and behavior. They will also engage in disciplinary practices that require them to read and interpret data, make comparisons and applications, and develop evidence based arguments. In addition, they will complete a political science research or applied civics project.

TECHNOLOGY EDUACTION

Introduction to American Cinema: The Mechanics of Visual Storytelling	Elective	Semester
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9-12th Grade

.5 credit

Eligible for Dual Enrollment with Penn Highlands

Prerequisite: A final Average of 83% or higher in English

The course is a thematic and historical study of American cinema. It introduces the history, technology, vocabulary, fundamentals, visual symbolism, style, and realism of American filmmaking. Students will also explore the ever increasing industry of film making through various technological lenses to appreciate the number of individuals involved with generating the movies we enjoy watching. Through the exploration of a selection of quintessential films that have made a lasting impression on American society, students will apply a critical lens to scrutinize the execution of the technical elements involved with generating a story visually and how well that film applied those techniques learned in class to achieve the overall impact of the film.

Invention Convention and Innovation
7th Grade

Cycle Course

9 weeks

Invention Convention and Innovation explores and develops the concepts of technology, the engineer design process, systems, and the history of invention and innovation through hands on applications. Students explore the history of inventions and innovations including their impacts on society and the interconnected impacts of each discovery and development. Students learn core concepts of technology and engineering and are given the chance to apply their creativity through collaborative projects.

Foundations of Technology and Engineering
Intended for 9-10 Grade

Elective

Semester

.5 credit

Resource/safety limit: maximum of 15 students

Foundations of Technology and Engineering builds upon the concepts developed in elementary and middle school STEM classes by preparing students to understand and apply technological concepts and processes. This class utilizes group and individual activities that engage students in creating ideas, developing innovations, and engineering practical solutions. Technological and Engineering concepts covered are: 1) processing and engineering design, 2) materials manufacturing and fabrication 3) core technologies 4) drafting and design with CAD

Digital Design and Rapid Prototyping
10-12th Grade

Elective

Semester

.5 credit

DIY-Woodworking 1
10-12th Grade

Elective Semester
 .5 credit

For safety a maximum of 15 students

The intent of this course is to teach students that should be in their home toolboxes and how to use them. This course will provide students with the physical and safety skills associated with wood processing, while also introducing them to the design process and problem solving to provide the to provide the confidence and skills to make home repairs or begin projects at home. This course will introduce the wood laboratory, safety regulations, the safe operation of battery operated power tools, hand tools, the design process, wood finishing, and the fundamentals of do-it-yourself. Over the course of the 18 weeks, the students will be exposed to the content of the course, machine processes, and design process, as well as complete several projects.

DIY-Woodworking 2
11-12th Grade

Elective Semester
 .5 credit

Prerequisite: 83% or higher final grade in DIY-Woodworking 1 or an 83% or higher in Foundation of Technology and Engineering.

For safety, a maximum of 10 students

The intent of this course is for students to continue to develop the physical and safety skills associated with wood processing, while also improving on design skills and problem solving. The students will be working in the computer lab and the wood lab to design and create several projects throughout the semester. Over the course of the 18 weeks, the students will be exposed to the content of the course, machine processes, design process, benchtop machines, and CAD software to complete several projects.

**GREATER JOHNSTOWN CAREER AND
TECHNOLOGY CENTER
BUILDING BRIGHT FUTURES**

**For more detailed information
on programs of study
visit**

www.gjctc.org

**For applications
see your school counselor**



Career success and postsecondary education success require the same level of college prep coursework. The Pennsylvania Department of Education's (PDE) focus is to ensure that every student is prepared for college and a career. Therefore, PDE has mandated that all Career and Technical schools adapt programs of Study (POS) under the Students Occupationally and Academically Ready (SOAR) program. Programs of Study incorporate secondary education and postsecondary education elements; include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education; may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits and lead to an industry-recognized credential or certificate at the postsecondary level or an associate or baccalaureate degree. The Greater Johnstown Career and Technology Center (GJCTC) supports this initiative and offers the following areas of Programs of Study: Administrative Assistant/Secretary, Advanced Manufacturing/Robotics, Automotive Technology, Collision Repair and Refinishing, Construction Technology, Cosmetology, Culinary Arts, Diesel Mechanics, Early Childhood Education, Graphic and Digital Media Design, Health Assistant, Lab Technology, Machine Tool Technology, Sports Medicine, and Welding. Please visit the following website: www.collegetransfer.net. For more information about SOAR visit www.pa.gov and search SOAR.

The Greater Johnstown Career and Technology Center offers the following Programs:

ADMINISTRATIVE ASSISTANT/SECRETARY

**This program is available to Greater Johnstown School District Students*

Course Description:

- Learn concepts for supporting managers through document preparation, project coordination, and data entry
- Explore various software systems to develop confidence, professionalism, and the ability to work in a team environment
- Develop workplace accuracy through concepts related to time management and organizational concepts

<p><u>Certifications:</u></p> <ul style="list-style-type: none"> • Microsoft Certified Pro • OSHA 10-Hour General Industry • S/P2 	<p><u>Hands-On Training:</u></p> <ul style="list-style-type: none"> • Safety • Professionalism • Computer-Based Education • Keyboarding • Design, Layout & Production • Clinical Experience • Communication Skills • Problem Solving
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ADVANCED MANUFACTURING/ROBOTICS

Course Description:

- Apply advanced manufacturing concepts to design, invent and product concepts through various processes (i.e. 3D Printing, Laser Printing, Robotic Welding & Machining)
- Use innovative technology equipment to develop confidence and work ethic to support the manufacturing process from concept to creation
- Exercise creative thinking skills to enhance individualized education

Certifications:

- AWS
- NIMS-CNC
- Drone Pilot
- OSHA 10-Hour General Industry
- S/P2

Hands-On Training:

- Safety
- Design, Layout & Production
- 3D Printing
- Layout Design
- Blueprint Reading
- Computer Modeling
- Robotics Rapid Prototyping

AUTOMOTIVE TECHNOLOGY

Course Description:

- Use advanced equipment and techniques found in professional auto collision repair companies
- Design, prepare, paint and refinish vehicle surfaces
- Reconstructing vehicles back to pre-accident condition
- Graduates are prepared for ICAR Certification, immediate employment, and further education.

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Technology Management – Credits given: 15

Certifications:

- ACT National Career Readiness
- Air Conditioning Certification
- ASE Student Certification
- PA State Inspection License
- S/P2 Safety Training
- OSHA 10-Hour Automobile

Hands-On Training:

- Vehicle maintenance services
- Steering and suspension systems
- Braking systems
- Heating and air conditioning systems
- Engine mechanical, cooling and exhaust systems
- Electrical systems
- Engine performance

COLLISION REPAIR AND REFINISHING

Course Description:

- Use advanced equipment and techniques found in professional auto collision repair companies
- Design, prepare, paint, and refinish vehicle surfaces
- Reconstructing them back to pre-accident condition
- Graduates are prepared for ICAR Certification, immediate employment, and further education

Hands-On Training:

- Safety
- Business Fundamentals
- MIG/GMAW and STRSW
- Structural and non-structural
- Mechanical and electrical systems
- Painting and refinishing

Certifications:

- Student ASE Non-Structural Repairs
- Student ASE Painting and Refinishing
- Student ASE Mechanical and Electrical Systems
- S/P2 Collision Repair Safety Certificate
- S/P2 Collision Pollution Prevention
- Automotive Safety Inspection License
- ACT National Career Readiness
- OSHA 10-Hour General Industry

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Technology Management – Credits given: 15

CONSTRUCTION TRADES

Course Description:

- Construct building projects from blueprints to completion
- Explore and develop techniques in Carpentry, Masonry, Electrical, Plumbing, and an introduction to HVAC
- Operate a wide range of professional hand, power and air tools

Articulation Agreements

- Penn Highlands Community College Degree: Associates of Applied Science Entrepreneurship – Credits given: 15
- Thaddeus Stevens College of Technology – 9 credits in the Residential Remodeling Technology Program

Certifications:

- | | |
|---|--|
| <ul style="list-style-type: none">• NCCR Certifications• Core Curriculum• Construction Technology• ACT National Career Readiness• S/P2 Construction• OSHA 10-Hour Construction | <ul style="list-style-type: none">• Site Layout• Carpentry• Masonry• Plumbing• Framing Hand, Power and Air Tools• Drywall |
|---|--|

Hands-On Training

- Safety
- Electrical
- HVAC
- Energy Efficiency
- Blueprints
- Roofing
- Flooring

Uses nationally recognized curriculum built upon industry standards

COSMETOLOGY

Course Description:

- Experience a full-service interactive salon environment
- Use professional salon techniques to provide a full range of hair, nail and skin care services

Certifications:

- The Cosmetology course assists students in preparing for and passing the PA State Board of Cosmetology licensing exam. Students must complete 1,250 satisfactory hours of instruction to be eligible for the exam.
- ACT National Career Readiness
- OSHA 10-Hour Cosmetology
- S/P2 Cosmetology Safety

Hands-On Training:

- Safety and sanitation
- Hair shaping (cutting)
- Hair coloring
- Temporary Hair removal
- Nail technology
- Trichology and chemistry
- Cosmetic Dermatology
- Professional business practices
- PA Cosmetology Law
- Hair styling
- Chemical texturizing
- Make-up

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Entrepreneurship – Credits given: 15

Create and develop unique styles to exceed client expectations

CULINARY ARTS

Course Description:

- Work side-by-side with a professional chef to create gourmet meals and desserts
- Plan, prepare, and serve meals for upscale events and casual dining
- Create and produce food with an artistic presentation

Culinary Arts is the #1 employer in the nation.

Hands-On Training:

- Safety
- Sanitation
- Purchasing and receiving
- Storage
- Nutrition
- Cutting tools and utensils
- Standardized recipe preparation
- Front-of-house procedures
- Basic baking practices
- Plan and cost menu

Certifications:

- ACT National Career Readiness
- ServSafe Certification
- ProStart Certificate of Completion
- S/P2 Workplace Safety
- S/P2 food Safety

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Entrepreneurship – Credits given: 15
- Allegany College of Maryland, Associates of Applied Science Culinary Arts – 10 Credits, Hospitality Management – 7 Credits, or Certificate in Dietary Manager – 7 credits

DIESEL TECHNOLOGY

**This program is available to Greater Johnstown School District Students.*

Course Description:

- Analyze and repair complex electric, hydraulic and diesel fuel systems for a variety of heavy equipment
- Troubleshoot, repair and assemble diesel and gas powered engines and machinery

Certifications:

- S/P2 Safety and Pollution Prevention
- ASE Student Certification
- PA State Inspection Course
- Section 609 Mobile Air Conditioning Certification
- OSHA 10-Hour General Industry

Hands-On Training:

- Safety
- Suspension and steering
- Preventative maintenance
- Fuel system
- Cooling System
- Brake systems
- Tools, Fabrication, and Hardware
- Driveline
- Air intake and exhaust systems
- Electrical/electronic

Use Equipment and techniques found in professional heavy equipment facilities

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Entrepreneurship – Credits given: 15
- University of Northwestern Ohio – 12 Credits

EARLY CHILDHOOD EDUCATION

Course Description:

- Prepare young children for educational success
- Research, create and present developmentally appropriate learning material for activities for children
- Daily interaction with children

Hands-On Training:

- Professionalism
- Health and Safety
- Learning environment
- Child development
- Classroom management and positive guidance
- Program partnerships
- Standard Curriculum and assessment
- Learning activities
- Clinical experience
- Crime and violence prevention

Certifications:

- ACT National Career Readiness
- Child Development Associate (CDA)
- Mandated Reporter
- CPR/First Aid
- New Staff Orientation
- Heart Saver First Aid
- Heart Saver CPR
- Heart Saver AED
- OSHA 10-Hour Healthcare

Preschool teachers are most often employed in child day care services, religious organizations, local government educational services, and private educational services.

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Child Development – Credits given: 9
- Penn Highlands Community College Degree: Associates of Applied Science Entrepreneurship – Credits give: 15
- Penn Highlands Community college Degree: Associates of Applied Science Early Childhood Education – Credits given: 6
- St. Francis University Francis Worldwide: Associate of Early Childhood Education – Credits given: 6

GRAPHIC AND DIGITAL MEDIA DESIGN

Course Description:

- Produce a full-range of creative client projects
- Create illustrations, logos, and dynamic visuals to communicate through print and digital media
- Use the same advanced equipment, software and techniques as professional graphic designers

Certifications:

- ACT National Career Readiness
- Adobe Certified Associate Certification:
 - Adobe Illustrator
 - Adobe Photoshop
- OSHA 10-Hour General Industry

Hands-On Training:

- Safety
- Drawing and illustration
- Color theory and application
- Digital imaging
- Design, layout and production
- Typography
- Digital photography
- Professional practices

About three in ten designers are self-employed; many do freelance work in addition to holding a salaried job in design or another occupation.

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Entrepreneurship – Credits given: 15
- Harrisburg University of Science and Technology, Interactive Media Program – Credits given: 4

HEALTH ASSISTANT

Course Description:

- Develop medical assisting skills using high-tech equipment found in today's health care facilities
- Experience live clinical instruction at long-term care facilities
- Practice medical assistant skills in a high-tech SIM lab

Hands-On Training:

- Safety
- Communication
- Emergency care
- Nutrition and hydration
- Human body and diseases
- Professionalism
- Infection control
- Human needs and development
- Moving, Lifting and positioning
- Medical terminology

Certifications:

- ACT National Career Readiness
- American Heart Association Healthcare Provider CPR
- American Heart Association First Aid
- Certified Nurse Aide Licensure
- National Safety Compliance:
 - Safety Orientation for Health Care
 - Bloodborne Pathogens
 - HIPPA Training
 - Heart Saver First Aid
 - BLS Provider CPR
 - BLS Provider AED
- OSHA 10-Hour Healthcare

Students will be able to take their Certified Nurse Aide (CAN) license exam in their senior year of high school, once they have completed the 150-hour course within the program

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Entrepreneurship – Credit give: 15
- Alleghany College of Maryland: Associate of Applied Science Medical Administrative Assistants – Credits give: 12

LAB TECHNOLOGY

**This program is available to Greater Johnstown School District students*

Course Description:

- Explore the multi-faceted world of laboratory work, including genetic engineering, microbiology, investigative forensic science, quality control and agricultural and animal science disciplines
- Learn laboratory techniques and concepts you need to excel in this exciting field

There are over 1,600 life science and biotech-related companies in Pennsylvania

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Entrepreneurship - Credits given: 15

Certifications:

- ACT National Career Readiness
- First-Aid Certification
- Heart Saver First Aid
- Heart Saver CPR
- Heart Saver AED
- OSHA 10-Hour Healthcare

Hands-On Training:

- Comprehensive safety training
- Extensive skills training
- Training on equipment found in professional labs

state-of-the-art laboratory

Perform scientific inquiry and analysis in our

MACHINE TOOL TECHNOLOGY

*This program is available to Greater Johnstown School District students

Course Description:

- Experience a fast paced, high-performance manufacturing environment
- Utilize advanced computer-controlled technology to manufacture precise steel, aluminum and plastic components

Machinist and tool and die makers are high priority occupations in Pennsylvania

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Technology Management – Credits given: 11
- Thaddeus Stevens College of Technology, Computer Integrated Machining – Credits given: 11

Certifications:

- National Institution of Metalworking Skills: NIMS
- Machining Level 1
- Machining Level 2
- OSHA 10-Hour General Industry

Hand-On Training:

- Safety
- Layout
- Lathes
- Milling machines
- Metallurgy
- Blueprint reading
- CNC programming

MasterCam

Create and read blueprints with ACAD and

SPORTS MEDICINE

*This program is available to Greater Johnstown School District students

*This program is delivered via a hybrid system that will be offered in your school without the daily travel to GJCTC

Course Description:

- Develop skills to assist in rehabilitation services under the supervision of physical therapist, occupational therapists and other therapeutic professionals
- Perform routine functions in support of rehabilitation providers, including instruction in roles and responsibilities of rehabilitation providers, basic function of the human body, disabling conditions, therapeutic skills, client management and communication skills
- Become a driving force on a professional healthcare team to deliver high-quality patient care

Articulation Agreement

- Waynesburg University: Exercise Science Pre-Athletic Training Program Credits given: 7

Certifications:

- OSHA10-Hour Healthcare
- Bloodborne and Airborne Pathogens
- NOCTI Rehabilitation Aide
- In conjunction with the National Academy of Sports Medicine, students may earn:
 - Certified Personal Trainer
 - Certified Group Fitness Instructor
 - Certified Exercise Specialization
 - Performance Enhancement Specialization
 - Behavior Change Specialization
 - Nutrition Certification
- First Aid/CPR/AED

Hands-On Training:

- Anatomy and Physiology
- Medical Law and Ethics
- Patient Prep and Positioning
- Therapeutic Modalities
- Primary Care
- Exercise Science and Prescription

industry standard Uses nationally recognized curriculum built upon

WELDING:

Course Description:

- Use advanced fabrication equipment and welding techniques to build, assemble and repair metal components
- Read blueprints to meet critical design specifications

Articulation Agreements:

- Penn Highlands Community College Degree: Associates of Applied Science Entrepreneurship - Credits given: 15
- Thaddeus Stevens College of Technology, Welding Technology Credits given: 10

Hands-On Training:

- Safety
- Weld symbol interpretation
- Gas metal arc welding
- Gas tungsten arc welding
- Manual plasma arc cutting
- Welding and drawing
- Shielded metal arc welding
- Flux cored arc welding

Develop the confidence, work ethic and team

cooperation necessary for a career in fabrication

Certifications:

- Oxyfuel gas cutting
- Visual examination, inspection and testing
- ACT National Career Readiness
- American Welding Society SMAW: 1G, 2G, 3G, 4G
- American Welding Society GMAW: 1G, 2G, 3G, 4G
- American Welding Society FCAW: 1G, 2G, 3G, 4G
- OSHA 10-Hour General Industry
- S/P2 Welding Society

