

JERSEY SHORE AREA SENIOR HIGH SCHOOL

2021-2022

# Pathways Course Catalog

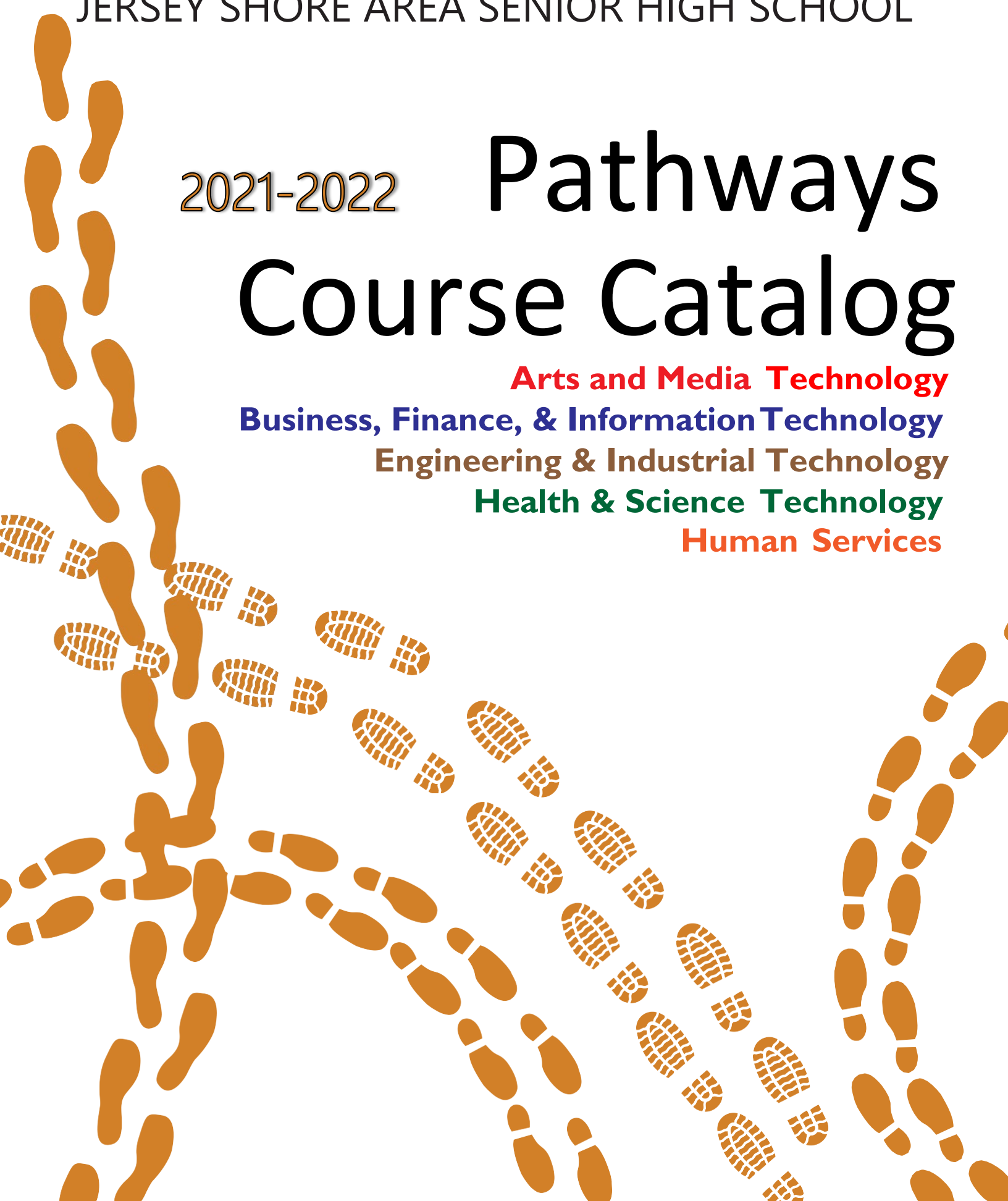
**Arts and Media Technology**

**Business, Finance, & Information Technology**

**Engineering & Industrial Technology**

**Health & Science Technology**

**Human Services**





# Curriculum Guide – Course Descriptions

## Art

**7000 Introduction to Art** *Grade 9* **.50 credit**

Introduction to art is designed to give students a broad experience in two dimensional and three dimensional art. Students will learn and use the elements and principles of art in a variety of media (paint, pastel, colored pencil, plaster, etc.). Assignments are designed to challenge, exercise creative muscle, and broaden artistic experience. This class will give students an excellent foundation for continuing their education in the art industry or communication technology pathway. All projects must be completed in order to receive credit for this course.

**7101 Learning to Draw** *Grade 9-12* **.50 credit**

Anyone can learn how to draw. With practice and a desire to learn, students who have no drawing skills can become excellent artists. This is an introductory course on drawing. Students will start from very basic techniques and applications advancing slowly and methodically to more advanced methods. They will work from nature, still life and people in a variety of media; exploring qualities of line, texture, light and space. All grade levels are allowed to sign up for this class. All projects must be completed in order to receive credit for this course.

**7135 Sculpture** *Grade 9-12* **.50 credit**

Students will create a wide range of sculptures using various materials, tools and techniques. Clay sculpting will be a large part of the class and will supplement any pottery classes that students may take. Materials will range from clay, wood, stone, plaster, and drywall. All projects must be completed in order to receive credit for this course.

**7160 Commercial Art** *Grade 9-12* **.50 credit**

In this course students use fine art and design skills to create and communicate in various areas of commercial design. This may include product design, storyboards and illustrations, fashion design, and interior design. Students will explore the creative planning involved in creating commercial concepts/ This course will give students an excellent foundation of skills to continue their education in the arts and communications technology pathway. All projects must be completed in order to receive credit for this class.

**7100 Learning to Paint** *Grade 10-12* **.50 credit**

This is an introductory painting course. Students will use water-based paints including acrylic, watercolor and tempera. Using a variety of brushes and techniques, students will create paintings that range from realistic to abstract. You must be in grades 10, 11 or 12. All projects must be completed in order to receive credit for this course.

**7001 Art and Design** *Grade 10-12* **.50 credit**

This course is designed for those students who wish to develop their artistic skills further. Students will focus on the use of the Elements and Principles of Arts to develop an understanding of the creative process involved in producing art. Projects will give the student a chance to work with a variety of media and subject matter. All projects must be completed in order to receive credit for this class.



## Business, Finance and Information Technologies

Business, Finance and Information Technologies is a path to a successful career. The demand for persons with business skills is constantly growing, especially in the accounting/finance, marketing, administrative assistant, and technology-related fields. Business and Computer Technologies allow students to do the following: (1) develop life skills needed by all consumers; (2) prepare for both college, employment, and personal finances; (3) acquire lifelong skills and habits to apply to a career; (4) broaden life-long work and study options; (5) pretest career interests before going to college; and (6) provide an opportunity to apply academic content. The courses offered by the Business and Computer Technologies Department are designed to provide the skills and competencies that will be used in a variety of careers as well as student's personal lives. *Any student may elect business courses.*

**2178 Business Math** **Grade 11-12 1.0 credit**

This course involves such concepts as interest, discounts, purchasing, selling, tax computations, commissions, insurance, investments, and financial institutions. By learning this type of material, the student will become more efficient, effective, and competent in the type of math used in the real world by both business people and consumers. This course is accepted as a math credit.

**4202 Business Finance** **Grade 11-12 .50 credit**  
*(Required for Graduation)*

Personal Finance and Business Applications introduces students to the business concepts and skills required in today's marketplace. Students need to have a basic understanding of business principles, computer applications, and personal finance to become productive members of the workforce. The intent of the course is to inform students of their various financial responsibilities and to provide them with opportunities for self-awareness, expression, and satisfaction in a highly technical and competitive society.

**4212 Principles of Management (MGT105)** **Grade 11-12 1.0 credit**  
*Dual Enrollment option available*

Introduction to the topic of management, defined as the process of setting and achieving organizational goals, effectively and efficiently, through the use of human and other resources. The four functions of management - planning, organizing, leading, and controlling - provide a framework for the course and are examined in considerable detail. Emphasis on contemporary management issues such as diversity and recognition of the changing face of the American workforce; ethics and social responsibility and their increasingly important role for business; and the growing significance of international business.

**NOTE: This course is a Lackawanna College Dual Enrollment Course. Registered students will receive Three (3) College Credits through Lackawanna College upon successfully completing the requirements of the course. There is a cost associated with Lackawanna College Course of \$100 per credit. This cost is non-refundable. Registration and payment are due prior to the first day of school.**

**4210 Introduction to Business** **Grade 9-12 1.0 credit**

This course is highly recommended to all students! The course is designed as an introduction to some of the business courses offered at the high school. Students can use this course to help them find a possible career or interest area. This is a good course for those who will enter any field of business, and for everyone else who will ever have to make decisions involving money. Considerable time will also be spent in the microcomputer lab using software to supplement the regular classroom instruction. "Intro" can make the difference in your future.



**4421 Entrepreneurship *Grade 12* .50 credit****Prerequisite: Marketing**

An entrepreneur is a person who attempts to earn a profit by taking the risk of owning and operating his or her own business. Thousands of people become entrepreneurs each year. They may start their own businesses from scratch, buy existing businesses, or buy franchised businesses. The REAL (Rural Entrepreneurship through Action Learning) Entrepreneurship course will teach students the skills necessary to become a successful entrepreneur through a hands-on approach. In this course, students learn about self-employment through reading, research, and classroom activities.

**4420 Sports and Entertainment Marketing *Grade 12* .50 credit****Prerequisite: Marketing**

Explore the intriguing world of sports and entertainment from the perspective of marketing. This course will take you on a step-by-step journey through the exciting world of sports entertainment marketing. You will learn about the key functions of marketing and how those functions are applied to the sports and entertainment industry. Guest Speakers, case studies, projects, field trips, on-line activities of owning your own professional sports team will broaden the classroom learning experience.

**4450 Computer Applications/REQUIRED COURSE *Grade 9* .50 credit**

Computer Applications is a course that teaches students how to create, edit, and format word processing, spreadsheet, and presentation files using Microsoft Office. There is a strong focus on careers and the students will take the ASVAB diagnostic test (when available) or other career assessments to better understand career options. Introduction to the Internet and its research capabilities will be presented. Students must also complete a resume, a letter of application, other job-related materials, and digital citizenship topics.

**4700 Business Law 1 *Grade 11-12* .50 credit**

Business Law 1 is a one-semester course that involves principles of law as they apply to business and the consumer. This is an essential course for any student who is planning a career in business. It is highly recommended for business students and others who wish to elect an interesting and enjoyable course. Basic principles of law will be discussed with emphasis being placed on the following: the individual and his/her relationship with the law; our legal system; contract law; marriage, divorce and its legal consequences; and bailments. Current legal cases that relate to the course will also be discussed. Law is an instrument of social control which affects everyone. Business is the medium through which most of the necessities of life are provided to everyone. These two comprehensive and profoundly important fields of interest are ambitiously combined in the text and course on business law. Most colleges require students majoring in business to take at least two semesters of business law.

**4701 Business Law 2 *Grade 11-12* .50 credit**

Business Law 2 is a one-semester course that will cover the following topics: job and agency contracts; buying on credit; insurance (including automobile insurance); buying and renting of real property; consumer law; commercial paper (checks and promissory notes); and detailed study of various forms of business ownership. **Business Law 1 is not required to enroll in Business Law 2.**









**0053****Drafting and Design Engineering Exploration*****Grade 9*****.25 credit**

Computer Aided Drafting and Design is an industrial technology program used in many applications and industries, including automotive, apparel manufacturing, aerospace, architectural and building, and other process engineering careers. CADD (Computer Aided Drafting and Design) is used in the design and development of tools, machinery, electronics and various residential and commercial building schematics. CADD is also used to produce computer animation for special effects in movies, advertising, and technical manuals. This course introduces students to the basic skill and design for engineering careers using Computer Aided Drafting and Design.

This course could be taken with other exploratory .25 credit courses from the following programs: Networking, Automotive, Construction, Manufacturing, Building & Maintenance, and Communications.





## ***Building Property Maintenance***

---

**0048      Building Maintenance Exploration      *Grade 9*      .25 credit**

**(This course is part of the 9<sup>th</sup> grade pathway rotation)**

Students will be introduced to various skills and tasks which are necessary to work in the field of Building Maintenance and property care. The students will experience the use of available hand tools, machinery and operations. This course will serve as a foundation course for students who are interested in the Building Maintenance pathway.

This course could be taken with other exploratory .25 credit courses from the following programs: Networking, Manufacturing Engineering, Construction, Technology Education, Building & Maintenance and Communications.

**9782      Intro to Building Maintenance      *Grade 10*      .50 credit**

Introduction to Building Maintenance is an introductory course for student interested in the Building Maintenance and Construction Trades pathway. This course will provide an overview of the Construction Trades pathway by introducing the student to residential carpentry, electrical and plumbing systems, as well as landscaping and various maintenance related tasks.

**9780      Building Maintenance 1      *Grade 11-12*      2.0 credits**

**(Preference given to 11<sup>th</sup> grade)**

This program is designed to introduce students to the skills necessary for success in a career in building maintenance. Students will be instructed in, and exposed to, building maintenance and trades skills at the basic, intermediate and advanced levels, based on their needs and abilities. These skills will include: basic safety (which includes personal protective equipment, performance safety, and what to do if an accident occurs); communication and human relations skills; and hands-on experiences (which provide exposure and practice in each of the building maintenance areas). Students will work boots and may need to purchase a uniform.

**9781      Building Maintenance 2      *Grade 12*      2.0 credits**

**(Prerequisite: Building Maintenance 1)**

This program is designed to fine tune students to the skills necessary for success in a career in building maintenance. Students will be instructed in, and exposed to, building maintenance and trades skills at the basic, intermediate and advanced levels, based on their needs and abilities. The program continues to build upon skills learned in level 1.

**9784      Computer Aided Drafting and Design (*FLEX*)      *Grade 11-12*      .50 credit**

This program will allow students in the Engineering and Industrial Technology pathways to gain knowledge in the use of AutoCAD and related software. Students will receive instruction in the use of AutoCAD, AutoCAD architecture Revit, and Autodesk Inventor programs. Students will read, draw, and interpret shop drawings and building plans in 2D and 3D. Students will use drafting practices to reinforce mathematical concepts of area, perimeter, volume, and other geometric concepts.











**9311 Computer Systems & Networking 2****Grade 12****2.0 credits****(Prerequisite: Networking 1)**

This course will build upon the foundation developed in Level 1. Students will learn Domain Administration in a Microsoft Windows environment, Network Administration, System Administration concepts, and will be given the opportunity to specialize or concentrate in their area of interest.

**6017 Principles of Computer Programming (FLEX)****Grade 11-12****.50 credit**

Principles of Computer Programming provides an introduction to programming basics that can be used with any computer language. Concepts covered include: User Input, Output, Data Types and Variables, decision statements, looping, functions or methods, and arrays. Properties of algorithms, languages, and notations for describing algorithms, applications of a procedure-oriented language to problem solving are also covered. These concepts will be covered in a modern, high level, object oriented, open source (free) language such as Python. This course can be used as a building block into CTE courses in Electronics and Information Technology. This course meets the graduation requirement of .5 credits in Technology Education.



**9420 Home Remodeling and Renovation*****Grade 11-12 .50 credit***

Students selecting this course will receive instruction in home building including the skills needed to build a *Tiny House* that may be built during this class. Framing as well as plumbing and electrical needs will be covered. Flipping will include skills needed to remodel an older home making it a contemporary, modern, updated home, known as *House Flipping*. Curriculum will include tasks required to remodel a house and related costs to estimate potential profit. Training with construction hand and power tools will include projects students will be permitted to take home upon completion..



**6552                    Advanced Food Prep and Cooking*****Grade 10-12    .50 credit*****(Prerequisite: Introduction to Food Prep and Cooking)**

This class is the next step in your culinary education after the Introduction to Food Prep elective. We pick up right where we left off. The majority of the semester will be spent completing new recipes that focus on dry heat cooking methods such as deep-frying, pan-frying, and sautéing. You will also review the basic fundamentals of food preparation that we covered previously. This class is a great way to increase your skills and knowledge in the kitchen and develop your abilities to be able to create amazing dishes at home.







## Electives

**0610 Career Readiness Grade 10-11 .50 credit**

Students will be expected to work independently to successfully complete the course. Career Readiness will introduce students to career development strategies within a *Learn & Apply* format that facilitates skill development and application. In this course students will identify their interests and research career paths that match those interests. Students will develop a career portfolio, participate in mock interviews, demonstrate employability skills and produce collaborative presentations.

**9620 Introduction to Baking and Pastries Grade 9-12 .50 credit**

This elective is for anyone interested in pursuing a career in Baking and Pastry Arts or Culinary Arts. This course will introduce the fundamentals used in the bakeshop. In addition, a better understanding of food terminology and advanced cooking will be mastered. The student will learn various techniques including bread baking, cookie making, sweet dough production, and much more.

**9630 Advanced Baking and Pastries Grade 10-12 .50 credit**

**(Prerequisite: Introduction to Baking and Pastries)**

This elective is for anyone interested in pursuing a career in Baking and Pastry Arts. This course will introduce the fundamentals used in the bakeshop. In addition, a better understanding of food terminology and advanced cooking will be mastered. The student will learn various techniques including bread baking, cookie making, sweet dough production, and much more.

**6551 Introduction to Food Prep and Cooking Grade 9-12 .50 credit**

This elective course is meant to introduce students to cooking and working with food. Even if you have no experience coming in, you will leave feeling comfortable in the kitchen. This class will also help you to realize whether you have a passion for cooking and if you would like to possibly pursue it as a career. Our units will focus on specific cooking methods used in the kitchen today; boiling, simmering, poaching, steaming, roasting and many more. Each unit will include a number of recipes that you will prepare in groups and take with you to enjoy. Sanitation, equipment identification, and a large emphasis on knife skills are also included to begin a strong foundation in your culinary arts education.

**6552 Advanced Food Prep and Cooking Grade 10-12 .50 credit**

**(Prerequisite: Introduction to Food Prep and Cooking)**

This class is the next step in your culinary education after the Introduction to Food Prep elective. We pick up right where we left off. The majority of the semester will be spent completing new recipes that focus on dry heat cooking methods such as deep-frying, pan-frying, and sautéing. You will also review the basic fundamentals of food preparation that we covered previously. This class is a great way to increase your skills and knowledge in the kitchen and develop your abilities to be able to create amazing dishes at home.

**♦♦9301 Introduction to Networking (Spring only)**  
**(EET124)**

**Grade 10-12**

**.50 credit**  
**3 College Credits**

This Course is weighted 1.1

Introduction to the basic concepts and applications of computer and engineering technologies and the effects on professional and casual users, their employers and employees, and society. Applied skills include the use of current computer technology for data/information collection and organization; visualization, analysis, and interpretation of numeric computations; and the dissemination and presentation of solutions to engineering technology problems.

This course meets Pennsylvania College of Technologies Computing Literacy graduation requirement for all majors.

Students who enroll in this course with the intent to receive college credit must pass the Penn College Placement exam and purchase the book for this course. With successful completion, students will receive 3 credits for the EET124 course through Pennsylvania College of Technology.

**9730 Advanced Automation & Welding (FLEX)**

**Grade 11-12 .50 credit**

**\*\*Preference will be given to students enrolled in the CTE program**

Students will learn the theory and application of advanced automation & Welding processes for the 21st century. This class will focus on fabrication using CADD, CAM, 3D Printing, Welding and Plasma cutting. Applications will require the proper setup and operation of the automated and welding equipment. Other areas of emphasis will include proper use of tooling, fixtures and inspection gages. This course will be project based, and will be utilize manual and advanced automated tools. Students will manipulate a variety of metallic materials as well as plastics material.

**9420 Home Remodeling and Renovation (FLEX)**

**Grade 11-12 .50 credit**

**\*\*Preference will be given to students enrolled in the CTE program**

Students selecting this course will receive instruction in home building including the skills needed to build a *Tiny House* that may be built during this class. Framing as well as plumbing and electrical needs will be covered. Flipping will include skills needed to remodel an older home making it a contemporary, modern, updated home, known as *Houseflipping*. Curriculum will include tasks required to remodel a house and related costs to estimate potential profit. Training with construction hand and power tools will include projects students will be permitted to take home upon completion.

♦♦ 9426  
(BCT103) **Construction Hand and Power Tools (FLEX)**

*Grade 11-12* **.50 credit  
1.0 college  
credit**

**This course is weighted 1.1**

**\*\*Preference will be given to students enrolled in the CTE program**

Survey of hand and power tools typically used to perform construction work. Emphasis on the development of skills needed to effectively perform layout, measurement, cutting, fastening, and finishing operations. Study also includes maintenance of tools and equipment, safe use of hand and power tools, and emerging tool technology. This class fulfills the required 0.5 Technology Ed credits for graduation. Students who enroll in this course with the intent to receive college credit must pass the Penn College Reading Placement exam and purchase. **With successful completion, students will receive 1 credit for the BC103course through Pennsylvania College of Technology.**

**9147** **Graphic Design for the Web (FLEX)**

*Grade 11-12* **.05 Credits**

**\*\*Preference will be given to students enrolled in the CTE program**

Graphic Design for the web is an elective-based course in which students are introduced to the various conceptual and technical aspects of designing content for the web. This course examines the fundamental basics of HTML and CSS in accordance to current internet standards. Students will explore the website design process including layout/conceptualization, to publication, while utilizing various HTML tags, CSS structuring, etc. Additionally, students will learn the basics of developing the front-end design for apps/websites, etc. using prototyping software that allows fully functional mobile apps and websites to be built and tested for usability.

**9784** **Computer Aided Drafting and Design (FLEX)**

*Grade 11-12* **.50 credit**

**\*\*Preference will be given to students enrolled in the CTE program**

This program will allow students in the Engineering and Industrial Technology pathways to gain knowledge in the use of AutoCAD and related software. Students will receive instruction in the use of AutoCAD, AutoCAD architecture Revit, and Autodesk Inventor programs. Students will read, draw, and interpret shop drawings and building plans in 2D and 3D. Students will use drafting practices to reinforce mathematical concepts of area, perimeter, volume, and other geometric concepts.

**6015** **Principles of Electronics (FLEX)**

*Grade 10-12* **.50 credit**

**\*\*Preference will be given to students enrolled in the CTE program**

In Principles of Electronics students are introduced to various concepts and topics in electronics technology such as electricity fundamentals, basic circuit design, electrical component installation/function, multi-meter use, principles of automation, and principles of data communication. The course is setup as partial theory and partial hands-on lab work. Students will apply math skills to verify circuit operation. It is expected that students have a basic understanding of algebra. This course can be used as a building block into CTE courses in Electronics, Information Technology, and Automotive. This course meets the graduation requirement of .5 credits in Technology Education.

**6017 Principles of Computer Programming (FLEX) Grade 11-12 .50 credit**

**\*\*Preference will be given to students enrolled in the CTE program**

Principles of Computer Programming provides an introduction to programming basics that can be used with any computer language. Concepts covered include: User Input, Output, Data Types and Variables, decision statements, looping, functions or methods, and arrays. Properties of algorithms, languages, and notations for describing algorithms, applications of a procedure-oriented language to problem solving are also covered. These concepts will be covered in a modern, high level, object-oriented, open source (free) language such as Python. This course can be used as a building block into CTE courses in Electronics and

**◆◆4438 Web Page Development (FLEX) Grade 11-12 .50 Credits**  
**BWM150 3 College Credits**

**\*\*Preference will be given to students enrolled in the CTE program**

Introductory coverage of the Internet and online Web technologies. Skills learned include how to plan, create, and maintain static web pages. Students who enroll in this course with the intent to receive college credit must pass the Penn College Placement exam and purchase the book for this course. With successful completion, students will receive 3 credits for the BWM 150 course through Pennsylvania College of Technology.

**◆◆ 9705 The Plastics Industry (FLEX) Grade 11-12 .50 credit**  
**(PPT115) 2.0 college credits**

**This course is weighted 1.1**

Overview of the plastics industry, including materials, resin codes and mold processes. Topics include the many types of career opportunities in the industry, local industry, thermoforming, blow molding, and injection molding. Discussion also covers the nature of plastic product manufacturers, work environment, and current market research. This course fulfills the required 0.5 Technology Ed credits for graduation. **Students who enroll in this course with the intent to receive college credit must pass the Penn College Placement exam. With successful completion, students will receive 2 credits for the PPT115 course through Pennsylvania College of Technology.**

**9705 Vehicle Maintenance and Service (FLEX) Grade 11-12 .50 credit**

Students will learn the theory and application of vehicle maintenance, fleet maintenance operations and basic car care. This course focuses more on maintaining a vehicle as opposed to repairing them. This course includes necessary information and skills for Automotive 1 and 2, but is also a stand-alone course for those looking to gain knowledge about how to maintain and care for a vehicle. Topics covered are basic maintenance and servicing of all vehicle systems from chassis to powertrains to interior systems.

**9930 Co-operative Education Experience Grade 12 up to 4.0 credits**

**\*\*This course is only available to students enrolled in the CTE program**

The Co-operative Education experience allows students to gain school-to-work skills through work-based placement opportunities for CTE students who are enrolled in a Career and Technical Education Program. Students who meet the requirements of basic trade and technical training, good attendance, a good attitude and work habits, are recommended to the employer for on-the-job training. The Cooperative Education experience translates to a student grade and credit is granted towards graduation. Students can earn up to four (4) elective credits through a Cooperative Education experience.













# Mathematics

Upon completion of 8<sup>th</sup> grade, all students will need to choose a math pathway for the high school. A score of Proficient or Advanced on the Keystone Algebra 1 exam in 8<sup>th</sup> grade is a prerequisite for the Honors Pathway.

## Career or Academic Pathway-Mathematics

---

**(Workforce, technical or 2 year associates degree pathway)**

*With teacher recommendation*

**2120 Career Algebra 1 Grade 9 1.0 credit**

The study of Algebra lays the foundation for mathematics, sciences, and technical courses a student will be taking in the future. Students learn to express relationships verbally, pictorially, graphically, and symbolically. Equations are solved graphically prior to solving them symbolically. Emphasis is on connections to the real world and to various mathematical strands. Geometric models are used to connect the visual and the symbolic. Use of scientific and graphing calculators is encouraged throughout the course. The emphasis in this course is on the concrete applications and concept. (Not a Keystone Exam triggercourse)

**2148 Career Algebra 2 Grade 10 1.0 credit**

This course is a continuation of topics covered in Career Algebra 1. Various topics are introduced such as functions, polynomials, series, sequences, and conic sections. Emphasis is placed on fundamental algebra skills such as factoring and solving linear systems. Use of a graphing calculator is essential throughout the course. (All students who have not scored proficient or advanced on the Keystone Algebra I Exam must take the exam at the middle and/or end of the course)

**2154 Career Algebra 3 Grade 11 1.0 credit**

This course is a continuation of topics covered in Career Algebra 2. Various topics are introduced such as functions, polynomials, series, sequences, and conic sections. Emphasis is placed on fundamental algebra skills; radical, rational, exponential, and logarithmic functions; and probability and statistics. Use of a graphing calculator is essential throughout the course.

**2150 Unified Algebra and Trig Grade 12 1.0 credit**

**(Prerequisite: Career Algebra 3 or Geometry)**

This course is a continuation of topics covered in Algebra 2. Functions and polynomials are continued with the introduction of trigonometric functions. Transformations of parent functions are extended from Algebra 2. Circular functions are introduced through the rectangular coordinate system. Use of a graphing calculator is essential throughout the course.

**2178 Business Math Grade 12 1.0 credit**

This course involves such concepts as interest, discounts, purchasing, selling, tax computations, commissions, insurance investments, and financial institutions. By learning this type of material, the student will become more efficient, effective, and competent in the type of math used in the real world by both business people and consumers.



**2146 College Readiness Algebra****Grade 12 1.0 credit**

This course is designed for seniors who will attend college after graduation and will need to be proficient on placement tests. This is not for students pursuing a math or science field. Topics include real numbers, variable expressions, linear equations in one and two variables, inequalities, exponents and scientific notation, polynomial operations, and application problems, systems of linear equations, polynomial division and special products, factoring, rational expressions, radical expressions, quadratic equations, functions and application problems. Emphasis on math study skills. Technology is used to enhance thinking and understanding, to solve problems, and to judge/verify results. Verbal, numerical, graphical and symbolic approaches assist in the discovery and communication of mathematical concepts.

**2178 Business Math****Grade 11 or 12 1.0 credit**

This course involves such concepts as interest, discounts, purchasing, selling, tax computations, commissions, insurance, investments, and financial institutions. By learning this type of material, the student will become more efficient, effective, and competent in the type of math used in the real world by both business people and consumers. This course is accepted as a math credit.





♦♦ 2147  
MTH 124

**Technical Algebra and Trigonometry I**

*Grade 12*

**0.5 credit  
3.00 college  
credits**

**(Highly recommended prerequisite: Course 2152--Academic Trig / Pre-Calculus)**

**This course is weighted 1.1**

Study of intermediate algebra and trigonometry, designed to prepare students for course work in their technical majors. Topics include algebraic expressions, linear equations, systems of equations, right triangle trigonometry, functions, graphs, geometry, ratio and proportion, and variation. Emphasis on problem solving and technical application as well as the use of technology. Not designed to prepare students for calculus. **Students who enroll in this course with the intent to receive college credit must pass the Penn College Placement exam. With successful completion, students will receive 3 credits for the MTH 124 course through Pennsylvania College of Technology.**

♦♦ 2139  
MTH 125

**Trigonometry II**

*Grade 12*

**0.5 credit  
3.00 college**

**(Recommended prerequisite: Course 2152--Academic Trig / Pre-Calculus; Required Prerequisite: MTH124)**

**This course is weighted 1.1**

Study of intermediate algebra and trigonometry, designed to prepare students for course work in their technical majors. Topics include factoring, algebraic fractions and equations, quadratic equations, trigonometric functions and graphs, radicals, complex numbers, exponential and logarithmic functions and graphs, nonlinear systems, and inequalities. Emphasis on problem solving and technical application as well as the use of technology. Not designed to prepare students for calculus. **Students who enroll in this course with the intent to receive college credit must pass the Penn College Placement exam. With successful completion, students will receive 3 credits for the MTH 125 course through Pennsylvania College of Technology.**

**2175                    Technical Math Applications**

*Grade 10-12*

**0.5 credit**

This semester course is designed to develop mathematic skills related to career and technical education fields. The course is designed to teach the PA Math Core Standards in an applied, technical process in relation to various workplace needs. The curriculum will follow the PA Department of Education Math T-Charts. This course is recommended for any student enrolled in the CTE program of study.





**5440 Spanish 4** **Grade 12** **1.0 credit**

**(Prerequisite: Successful completion of Spanish 3 or Spanish 3 Honors with a minimum 86% average)**

**Teacher recommendation advised**

Level 4 of language study is a refinement of concepts mastered at the preceding levels through continued practice of the basic skills. Cultural aspects and literature of the language will be explored with stress on reading and conversation skills. There will be continued emphasis on the benefit of foreign language to any chosen career. Evaluation will be based on oral participation, completion of homework assignments, individual and group projects, compositions, quizzes, and chapter tests. Consideration is given to student attitude and effort toward learning.

**5540 Spanish--Advanced Placement** **Grade 12** **1.0 credit**

**(Prerequisite: An average of 90% or higher in Spanish 3 Honors)**

**Teacher recommendation advised**

**This course is weighted 1.1**

AP Spanish will offer students with a 90% average or better in Spanish III Honors the opportunity to improve their skill level in the areas of listening, writing, reading, and speaking. This intensive preparation will enable independently motivated students to prepare for the AP exam thereby getting college credit and/or exemption from beginning levels of Spanish in college. Students should expect at least one hour of work per school night. The course will be conducted in Spanish, and students will be expected to have daily assignments prepared before coming to class, so that class time itself is best utilized for practice and discussion.

Students will be expected to take the AP Spanish Language and Culture exam.

**5120 German 1** **Grade 9-12** **1.0 credit**

A beginners course in German. No prior knowledge of German is required. Students will learn how to communicate effectively in German at a beginners level. Students will also gain an in-depth understanding of German culture. The *Komm Mit!* Level 1 textbook is used for German 1, which includes 12 chapters. The abilities of students who complete German 1 will measure at the *Novice High* level according to the ACTFL Proficiency Guidelines.

**5220 German 2** **Grade 10-12** **1.0 credit**

**(Prerequisite: Successful completion of German 1 with a minimum 86% average)**

A beginner/intermediate course in German. It is assumed that students have taken a German 1 course and have learned how to communicate effectively in German at a beginners level. Students continue to learn how to communicate effectively in German at a beginner-intermediate level. Students will continue to gain an in-depth understanding of German culture. The *Komm Mit!* Level 2 textbook is used for German 2, which includes 12 chapters. The abilities of students who complete German 2 will measure at the *Intermediate High* level according to the ACTFL Proficiency Guidelines.

**5320 German 3** **Grade 11-12** **1.0 credit**

**(Prerequisite: Successful completion of German 2 with a minimum 86% average)**

An intermediate/advanced course in German. It is assumed that students have taken a German 2 course and have learned how to communicate effectively in German at an beginner-intermediate level. Students continue to learn how to communicate effectively in German at an intermediate-advanced level. Students will continue to gain an in-depth understanding of German culture. The *Komm Mit!* Level 3 textbook is used for German 3, which includes 12 chapters. The abilities of students who complete German 3 will measure at the *Advanced High* level according to the ACTFL Proficiency Guidelines.





**5700 Music Theory 1** *Grade 10-12* **.50 credit**

**(Prerequisite: Previous knowledge of how to read music is required)**

The purpose of this course is to explore the basic elements of Music Theory and how music is composed. Students will learn how to write their own music by learning the rules of music composition and applying those rules using Sibelius music writing software. Students will be required to compose pieces based on compositional techniques learned in class. This semester course is open to all students who have an interest in the way music is composed or would like to learn the rules of music composition and how they are utilized today using the latest music writing software.

**5701 Music Theory 2** *Grade 10-12* **.50 credit**

**(Prerequisite: Completion of Music Theory I with a passing grade)**

The purpose of this course is to continue the study of Music Theory at a higher level. Students will apply the basic elements from Music Theory I to write their own music, but add more complex concepts of music composition. Students will be required to use Sibelius music writing software to compose pieces based on compositional techniques learned in class. In addition to the written theory portion of the course, students will also receive aural theory training which will aid in their ability to sight read and sight sing more accurately. This semester course is open to all students who wish to continue their Music Theory studies, explore the way music is composed, further understand the rules of music composition, and experience how they are utilized today using the latest music writing software.

**5705 Music History** *Grade 9-12* **.50 credit**

This course is designed to help students understand how music has progressed throughout history and the stylistic changes music endured during different eras. In this class, students will listen to various styles of sacred and secular music from various countries as well as music by well-known composers. Students should be prepared to take notes and keep a detailed notebook. In addition, students will be required, on occasion, to write short papers/essays and give oral presentations. This semester course is open to all students who have an interest in the history of music. *Previous knowledge of how to read music is not required, but would be helpful.*

**5710 History of Rock and Roll: 50's, 60's, 70's** *Grade 9-12* **.50 credit**

This semester course was created to fulfill the art/music/fcs component of the graduation requirements. It is designed to help students understand what constitutes the idea of "rock and roll" and its progression from the early 1950's through the 1970's. In this class, students will listen to examples of music from various artists/groups from the various time periods. In particular, considerable time is spent on music of the 1950's, 1960's, 1970's. Students should be prepared to take notes and keep a notebook for the class. In addition to quizzes/tests, students may be required to prepare an oral group presentation and an individual project.

**5711 History of Rock and Roll: 80's, 90's 2000's** *Grade 9-12* **.50 credit**

This semester course was created to fulfill the art/music/fcs component of the graduation requirements. It is designed to help students understand what constitutes the idea of "rock and roll" and its progression from the early 1980's through the 2000's. In this class, students will listen to examples of music from various artists/groups from the various time periods. In particular, considerable time is spent on music of the 1980's, 1990's, and 2000's. Students should be prepared to take notes and keep a notebook for the class. In addition to quizzes/tests, students may be required to prepare an oral group presentation and an individual project.

**5715 American Musical Theatre 1** **Grade 10-12 .50 credit**

The majority of the class work will be the study of 20<sup>th</sup> Century musical plays and musical comedies, and the interaction of plot, dialogue, and character as they serve as the framework for songs, dances, routines, and humorous episodes. Students will study excerpts from landmark musicals from the 1920's to the 1960's, as well as present day excerpts during their 'Clip of the Day.' Students will study famous composers, producers, librettists, choreographers, singers, dancers, and actors who were a part of this century's most successful productions on and off-Broadway. In addition, students will be learning how the elements of costume design, stage set, and lighting contribute to the overall musical production. This class will also develop an understanding of performance and students will demonstrate through performance: basic acting and singing skills. Students will be expected to try all basic performance skills as a part of this course.

**5716 American Musical Theatre 2** **Grade 10-12 .50 credit**

**(Prerequisite: Completion of American Musical Theatre 1 with a passing grade)**

This class is an extension of American Musical Theatre I. The majority of the class work will be the continuation of study of 20<sup>th</sup> Century musical plays and musical comedies, and the interaction of plot, dialogue and character as they serve as the framework for songs, dances, routines and humorous episodes. Students will study full-length productions as well as excerpts from landmark musicals from the 1960's to present, including film adaptations of Broadway musical stage plays, as well as present day excerpts during their 'Clip of the Day.' Students will study famous composers, producers, librettists, choreographers, singers, dancers, and actors who were a part of this century's most successful productions on and off-Broadway. In addition, students will be learning how the elements of costume design, stage set, and lighting contribute to the overall musical production. This class will also develop an understanding of performance and students will demonstrate through performance: basic acting and dancing skills. Students will be expected to try all basic performance skills as a part of this course.

**5720 Voice Class** **Grade 10-12 .50 credit**

This semester course was created to foster good vocal health and technique. Goals of the course are as follows: to improve technique, quality, and artistry of individual voices; and to focus class attention on common vocal problems and their remediation. Students will study three different genres of music including folk, classical, and musical theatre to perform in this class. In addition to performance, students will take an in-depth look at famous musicians from the 20<sup>th</sup> Century including the genres of folk, classical, and musical theatre. This course is performance based and all students are required to sing.

**5721 Guitar** **Grade 10-12 .50 credit**

This semester course was created to encourage nontraditional instrumental students to pursue music study. This course also fulfills the art/music/fcs component of the graduation requirements at Jersey Shore High School. In this class we will discuss techniques and topics including chords, scales, notation, strumming, and fingerpicking. Students may be required to practice on their own, take written quizzes/tests, and perform both alone and as a class.

*This course is open to students owning their own guitar.*



**8116 Introduction to Health Careers *Grade 10-12* .50 credit**

Examination of health majors and careers, including an evaluation of personalities in relation to career interests and values needed for success and satisfaction in the health care professions. Topics include discussion of requirements, daily roles, employment opportunities, and projections for the future in each of the selected health care fields. 2 Credits (2 Lecture). ,

**◆◆8117 Medical Terminology Survey *Grade 11-12* .50 credit**  
**(MTR 100) 2 College Credits**

Introduction to the basic structures and rules of interpreting medical terminology, designed to develop the ability to read, understand, and write the medical language. 1 Credit (1 Lecture),

**◆◆8118 Basics of Medical Terminology *Grade 12* 1.00 credit**  
**(MTR 104) 3 College Credits**

Foundation for the use of the language of medicine, with emphasis on correct pronunciation and spelling, various word parts, abbreviations and symbols, and terms pertaining to body systems. Etiology, symptomatology, pathology, and diagnostic procedures for identifying various disease processes provide an increased understanding of medically related conditions and procedures. 3 Credits (3 Lecture)







♦♦ 3500  
(CHM100)

**Fundamentals of Chemistry**

*Grade 11-12*

**1.50 credits**  
**4.00 college**  
**credits**

**(Prerequisite: Must have passed the Keystone Algebra Exam and take the Penn College Placement Exam  
This course CAN be taken after passing Chemistry, but a prior Chemistry course is not a prerequisite)**

**This course is weighted 1.1**

Basic principles of chemistry and its practice in laboratory. Emphasis on the underlying structure of matter (atoms, ions, molecules) and how structure determines properties. Designed to teach chemistry terminology and symbols, as well as to develop analytical and critical thinking skills. This course is intended for students planning to attend Penn College as a non-science major. Future Penn College students can complete a required science course for their degree program by completion of this course. **Students who enroll in this course with the intent to receive college credit must pass the Penn College Placement exam. With successful completion, students will receive 4 credits for the CHM100 course through Pennsylvania College of Technology.**

**3530**

**Honors Physics**

*Grade 11-12*

**1.0 credit**

**Prerequisite: Algebra 2 with at least 86% average**

Honors Physics is an academic course dealing with the relation between matter and energy, beginning with measurement and continuing with force and motion, vectors, momentum, work energy and power, wave transfer of energy, light and optics, direct current electricity, circuits, magnetic applications of electric and magnetic fields, and nuclear energy. High emphasis is placed on laboratory work and problem solving. Honors Physics is **STRONGLY** recommended for students planning on pursuing a four-year degree in an engineering, medical, technology, or science field.

**Grade 12**

**The electives listed at the end of the science section are available for all pathways in grade 12. Electives may be scheduled on a case-by-case basis depending upon the student pathway, grade level and prerequisites.**





**◆◆3555 Human Anatomy and Physiology Survey** *Grade 11-12* **1.00 credits**  
**(BIO 103)** **3.00 college Credits**

**Prerequisite: Passing grade in Biology and Chemistry and/or proficient score on Biology Keystone Exam**

**This course is weighted 1.1**

Overview of human anatomy and physiology. Emphasis on the relationships between the structures and functions in each body system as well as the interrelationships among all body systems in the maintenance of homeostasis. Laboratory work complements and reinforces lecture materials. Qualifying score on math placement exam required. Recommended corequisite: ENL111.

**3400 Environmental Science** *Grade 11-12* **.50 credit**

**Prerequisite: Successful completion of Biology & Algebra**

Environmental Science emphasizes global environmental concepts as they relate to local issues. Students will perform case study analysis, problem-solving, project creation and development, computer and internet use, oral reports/discussions, laboratory measurement, data collection and analysis, along with other activities utilized to promote student-centered learning.

**3410 Astronomy** *Grade 11-12* **.50 credit**

A survey of modern astronomy introducing topics from our solar system and other planetary systems, galaxies, the evolution of stars, and the methods and technology used to explore planetary and stellar processes. Included with this course is a lab that introduces the student to astronomical observations with the use of a series of telescopes and lab exercises.

**3330 Genetics and Microbiology** *Grade 11-12* **1.0 credit**

**(Prerequisite: Successful completion of Biology)**

Genetics requires a more detailed examination of the subject and will emphasize problemsolving, decision-making, critical thinking, applied learning, and knowledge. The topics covered in this course will range from Mendelian genetics to current genetics technologies and discoveries as well as their practical and ethical implications. Microbiology is a course with a major focus on the role of microorganisms such as bacteria and viruses in diseases. Other topics included in this course are some of the positive roles of microorganisms in areas such as food production, ecology and future technology. Laboratory work is stressed. This course will help prepare you to continue your Science education at the college level to prepare for careers in medical and health related fields.









**1450                      Advanced Placement United States History                      *Grade 12*                      1.0 credit**

**This course is weighted 1.1**

Advanced Placement United States History is a challenging course designed to be the equivalent of a college or university level United States history survey course. The course examines the political, social, economic, intellectual, and cultural history of the United States from colonial times to the present. Students should possess strong reading and writing skills and be willing to devote substantial time to the completion of class assignments. Emphasis is placed on analytical writing, class discussion, primary source interpretation, and critical reading of secondary sources. Students who enroll in this course will be expected to read and write at the college level. They must be prepared to dedicate substantial time outside of the normal school day to the study of history, and need to be committed to taking the Advanced Placement history exam offered in early May each year.

---

***Social Studies - Electives***

---

**The following elective is available for all pathways. It may be scheduled on a case by case basis depending upon the student pathway, grade level and prerequisites necessary.**

**1520                      Crime and the Law                      *Grade 11-12*                      .50 credit**

The purpose of this elective course is to give students a basic understanding of our criminal and legal systems. Topics included, but are not limited to, the history of our legal system, the courts, causes of crime, and entire criminal justice system. The focus of the course is on criminal law with students actively participating in two mock trials and one mock crime scene investigation.

**1530                      Introduction to Psychology                      *Grade 11-12*                      .50 credit**

Psychology is the study of mental processes, and how the mind and body work together. The content of this course includes, but is not limited to, the history of psychology, research, statistics, personal and social development, cognitive and emotional development, sensation and perception, sleep and dreams, conditioning, motivation, disorders and forms of therapy.

