

## Franklin Towne Charter High School

### Elective Course Descriptions

Prerequisite Course(s): Any course listed in this category must be completed prior to enrolling in the next course (can be the same year – prerequisite course in fall, next course in spring)

#### Arts:

##### **Art Foundations**

Art Foundations is designed to provide the beginner art student with the fundamental knowledge of fine arts. The course focuses on various techniques, processes, and materials used in drawing, painting, printmaking, and three-dimensional media. The course also provides a general knowledge of art history and vocabulary.

- **Open to:** Grades 9-11
- **Required Materials:** Sketchbook (can be purchased from school store)
- **Prerequisite Course(s):** None

##### **Computer Graphic Design 1**

Computer Graphic Design is a creative visual concepts course using computer software and illustration to communicate ideas that inspire, inform, engage, and captivate consumers. Students learn the fundamentals of design, as well as develop the overall layout and production process for various applications such as advertisements, magazines corporate logos, and other design projects and products. In this course students will begin to produce a digital portfolio consisting of design work throughout the semester.

- **Open to:** Grades 9-11
- **Required Materials:** Sketchbook (can be purchased from school store)
- **Prerequisite Course(s):** None

##### **Computer Graphic Design 2**

Computer Graphic Design 2 uses the enhancement of the Adobe Creative Suite software, which includes Photoshop, InDesign, and Illustrator to create advanced graphic documents. Advanced style and techniques will be used throughout the layout and design process. The design process will be explored further, and students will be given more challenging graphic tasks and assignments. Activities call for students to apply problem-solving methodology to analyze and formulate real-world solutions. Career options will be explored in the fields of Marketing, Advertising, and Graphic Design.

- **Open to:** Grades 10-12 with teacher approval
- **Required Materials:** Sketchbook (can be purchased from school store)
- **Prerequisite Course(s):** Computer Graphic Design 1

##### **Drumline 1**

This course is designed to immerse students in the world of percussion in a group setting. Students will learn how to play various cadences together, combining traditional Drumline selections with world rhythms from around the globe! Performance opportunities at pep-rallies, games, local events, parades, and stadiums will all be offered.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## **Drumline 2**

This is an advanced course designed to expand students' knowledge of the world of percussion in a group setting. Students will further their study on how to play various cadences together, combining traditional Drumline selections with world rhythms from around the globe! Performance opportunities at pep-rallies, games, local events, parades, and stadiums will all be offered.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** None

## **Instrumental Music 1 (formerly Pep Band 1)**

Students will be exposed to and gain a working knowledge of being a musician in the fields of and instrumental studies. This course is designed for students to experience the creative process that includes instrumental study, and an introduction to music theory. Individual lessons on an instrument will be provided, and no prior experience is needed. We offer piano, guitar, bass, drums, trumpet, sax, trombone, and vocals. Performance opportunities at pep-rallies, games, local events, parades, and stadiums will all be offered. This class is designed for students to explore an instrument and style of music that best interests them!

- **Open to:** Grades 9-11
- **Prerequisite Course(s):** None

## **Instrumental Music 2 (formerly Pep Band 2)**

This is an advanced course designed for students to experience the creative process that includes instrumental study, and an introduction to music theory. Individual lessons on an instrument will be provided, and no prior experience is needed. Students will further their study of piano, guitar, bass, drums, trumpet, sax, trombone, and vocals. Performance opportunities at pep-rallies, games, local events, parades, and stadiums will all be offered. This class is designed for students to expand their knowledge of their chosen instrument and style of music that best interests them!

- **Open to:** Grades 10-12 with teacher approval
- **Prerequisite Course(s):** Pep Band 1

## **Intro to Fashion Design**

In this course all lessons are based on Industry level Fashion Design Production. Intro to Fashion Design will cover the foundation of design. Students will learn how to create fashion illustrations, clothing flats, mood boards, color palettes, and fabrications. Students will be able to create conceptual boards for future brands throughout the semester.

- **Open to:** Grades 10-12
- **Required Materials:** Sketchbook (can be purchased from school store) & \$20 fee to cover cost of supplies
- **Prerequisite Course(s):** None

## **Muralism**

In this course students will learn different methods to create large scale artwork. Students will have the opportunity to paint a mural inside Franklin Towne. Students will be introduced to different types of art in the community and the importance of large-scale public artwork.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Art Foundations & Painting

## **Music Technology**

This course will introduce music technology software and hardware, focused on basic acoustics, digital audio, MIDI, and MIDI sequencing and notation software. Lab activities will place an emphasis on the operation and components of the typical MIDI and digital audio lab (hardware and software). Students will complete independent projects in areas such as digital audio, music notation, and MIDI sequencing.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## **Painting**

In this course students will learn watercolor and acrylic painting techniques to create original paintings. Students will develop an understanding of color theory, creating dynamic compositions, and work from observation with still lifes and photo references. Students will be introduced to contemporary and historical artists to gain a general knowledge of art history. Group critiques will be given periodically, while individual critiques will be on-going throughout the semester. At the completion of this course students will have a developed painting portfolio to showcase.

- **Open to:** Grades 10-12 with teacher approval
- **Required Materials:** Sketchbook (can be purchased from school store)
- **Prerequisite Course(s):** Art Foundations

## **Sculpture**

This course will focus on creating 3D artwork using a variety of materials and techniques such as paper mâché, cardboard, clay, and plaster. Students will gain knowledge in additive, subtractive, and assemblage techniques as a source of construction. Art history will be discussed frequently to illuminate the importance of good basic design and will afford a working vocabulary necessary for a functional approach to creating 3D works. At the completion of this course students will have a developed sculpture portfolio to showcase.

- **Open to:** Grades 10-12 with teacher approval
- **Required Materials:** Sketchbook (can be purchased from school store)
- **Prerequisite Course(s):** Art Foundations

## **Business:**

### **Business 1 (formerly Business Foundations)**

Students will understand the principles of marketing, management, and entrepreneurship. Topics studied include forms of business ownership, competition, international business, economics, and corporate regulations in the business environment. Come build the foundation you need to succeed in today's competitive business world.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## Business 2

Building on the skills acquired in Business 1, Business 2 will focus on concepts involving both management and marketing. This comprehensive course equips you with the key skills and strategies to navigate today's demanding business environment. Combining insights from both leadership and marketing perspectives, you'll gain the knowledge and tools to make informed decisions, build high-performing teams, and achieve impactful results.

- **Open to:** Grades 11-12; students who previously took Principles of Marketing or Management Concepts are ineligible for this course
- **Prerequisite Course(s):** Business 1

## Business of Sports & Entertainment

This exciting course dives into the dynamic world of sports business and entertainment, revealing the strategies, decisions, and hidden forces that drive these multi-billion-dollar industries. In this course, we will discuss analyzing revenue streams, discover how teams build brands and engage fans, understand the roles of executives, agents, and athletes, and learning how statistics and analytics are changing the game.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## Personal Finance

This semester-long personal finance course covers the essential personal finance topics necessary to become a financially capable student including banking, budgeting, credit, taxes, buying a car and paying for college. By the end of this course, students will have a thorough understanding of personal finance topics and be prepared to handle the financial responsibilities that exist while a high school student and after graduation.

*Note: this course is required for all students beginning with the Class of 2027*

- **Open to:** Grades 10-12; students who previously took Money Management are ineligible for this course
- **Prerequisite Course(s):** None

## Career:

## Cosmetology 1

This course is designed to train and inform students in the fundamental principles and practices of cosmetology in a real-world setting. Students will learn safety procedures, proper work habits, and desirable attitudes necessary to obtain a beginning level of proficiency and competency as an entry level cosmetologist or related position. Instruction will consist of both practical (hands-on) as well as theoretical (lecture). At the completion of this course the student will have the confidence and ability to pursue a career in cosmetology.

- **Open to:** Grades 9-11
- **Required Materials:** Students will be required to purchase supplies for this course from the school costing approximately \$60
- **Prerequisite Course(s):** None

## Cosmetology 2

Students will develop knowledge regarding various cosmetology design and color theory. Cosmetology 2 is an advanced course using the lessons that were taught in Cosmetology 1, with an expansion on hair cutting design such as razor cutting, texturizing, and elevation. Students will also be taught and able to demonstrate the science and art of proper hair coloring and highlighting techniques. Students will have the confidence and knowledge to build on their skills after the completion of this course.

- **Open to:** Grades 10-12 with teacher approval
- **Required Materials:** Students will be required to purchase supplies for this course from the school costing approximately \$60
- **Prerequisite Course(s):** Cosmetology 1

## Cosmetology 3: Skincare & Makeup

This course is designed to give students an overview of daily skincare and basic makeup techniques. Students will develop their skill in using the techniques on their classmates. While focusing mainly on basic makeup techniques there are projects that require more dramatic and stage like effects. Instruction will consist of both theoretical (lecture) and practical (hands-on). At the completion of this course the students will develop a skincare routine and have confidence in both doing their own makeup, as well as their classmates.

- **Open to:** Grades 11-12 with teacher approval
- **Required Materials:** Students will be required to purchase supplies for this course from the school costing approximately \$30
- **Prerequisite Course(s):** Cosmetology 1 and Cosmetology 2

## Culinary 1

In this course students will become comfortable and confident in a kitchen. Students are introduced to the fundamental concepts, skills, and techniques that promote success in the industry. Students will leave this course having gained the ability to confidently plan, prep, and produce a variety of high-quality meals from scratch on their own. Emphasis is placed on kitchen safety and sanitation, culinary nutrition, cost controls, culinary terminology, ingredient identification, cooking techniques, customer relations, and the development of hands-on skills. Students in the culinary arts program are given the opportunity to develop the skills and professionalism required to build a career as a cook, baker, chef, manager, or entrepreneur in the hospitality industry.

- **Open to:** Grades 10-11
- **Required Materials:** Students will be required to purchase supplies for this course from the school costing approximately \$25
- **Prerequisite Course(s):** None

## **Culinary 2**

In this course students begin with a review of Safety and Sanitation and understanding how to create a HACCP plan. Culinary 2 will further enhance the knowledge gained in Culinary 1 to prepare the student for more advanced culinary skills or for a career in the hospitality field. Students will work on recipes that challenge their skills and take them a step further. Students will be introduced to, and participate in, creating and executing special event menus to showcase the skills they have learned. These young culinarians will also be enrolled in a Pro-Start program to gain valuable professional certificates and training opportunities as well as competition and college scholarships opportunities backed by the National Restaurant Association Education Foundation.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Culinary 1

## **Culinary 3**

Culinary 3 is a semester course for serious culinary students who have successfully completed Culinary 1 & 2 and are planning for a career in the hospitality industry or furthering their skills purely for the love of cooking. This class can also be customized to meet individual student needs: help with selecting and applying to a Culinary School, help with preparing for cooking competitions to compete for scholarships and awards, help with finding employment in the hospitality industry. This course's emphasis will be on developing techniques and speed, which will be improved and refined with practice. Also, conceptual, and critical thinking will be encouraged to help analyze foods, menus, costs, people, and the workplace. Students will have the opportunity to earn further professional certificates and will qualify to use the culinary college portal to see what credit and scholarship grants are available at universities and colleges across the country purely for being a graduate of a Pro-Start affiliated training program.

- **Open to:** Grade 12 with teacher approval
- **Prerequisite Course(s):** Culinary 1 and Culinary 2

## **Video Production 1**

This course introduces the basics of video production by utilizing a video camera and video editing equipment. Students study video technologies, basic equipment operation, video editing, audio production planning, and visual storytelling. Students work individually and in groups to create video projects utilizing post-production editing. This is a project-based class in which students will team up with classmates to produce creative video projects.

- **Open to:** Grades 9-11
- **Prerequisite Course(s):** None

## **Video Production 2**

In this course students will build upon the experiences and techniques learned in Video Production 1 to create cinematic stories. They will incorporate the use of audio to strengthen projects, acquire lighting skills, and learn color correction while utilizing large sensor cameras to produce cinematic videos. Students will also be responsible for generating content for Franklin Towne Charter High School.

- **Open to:** Grades 10-12 with teacher approval
- **Prerequisite Course(s):** Video Production 1

### Video Production 3

Video Production 3 teaches students how to master the art of cinematic story telling. Students will be responsible for creating meaningful video content. Students will produce videos to impact the culture at Franklin Towne Charter High School as well as make short features. The students will make films for the news broadcast, the FT YouTube channel, and cover all FT events.

- **Open to:** Grade 11-12 with teacher approval
- **Prerequisite Course(s):** Video Production 1 and Video Production 2

### Woodshop 1

This course is an introduction to woodworking and machine use. Beginner level projects focused on incorporating machines and hand tools will be completed by all students.

- **Open to:** Grades 10-12
- **Required Materials:** Students will be required to purchase supplies for this course from the school costing approximately \$20
- **Prerequisite Course(s):** None

### Woodshop 2

This course is designed to teach students how to build projects based off of technical drawings and advanced techniques such as template creation, slip-tenon joinery, compound angles, and veneer pressing.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Woodshop 1

### Woodshop 3

This course is designed to have students independently design and create a “one-off” furniture piece. Students will learn to calculate material cost, lumber amount, and time of production.

- **Open to:** Grade 12 with teacher approval
- **Prerequisite Course(s):** Woodshop 1 and Woodshop 2

### Computer Aided Design:

#### Computer Aided Design 1

This is an introductory course covering the operation of a typical CAD (Computer-Aided Design) system. Content stresses drawing, modifying, and annotating commands and processes to produce technical drawings. Students develop entry-level CAD user skills using the current version of the AutoCAD software (a program developed by AutoDESK and used in the design and manufacturing industry). Emphasis in level 1 is placed on 2-dimensional architectural and structural design. Student work is compiled into individual portfolios to be organized and presented in an attractive, professional format. Students are also introduced to CNC machining through the in-class beginner usage of a CO2 laser cutter and engraver. This course is beneficial for those interested in engineering, manufacturing, architecture, interior design, and/or trade skills such as reading and designing blueprints.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** Geometry

## Computer Aided Design 2

This course builds on the introductory course covering the operation of a typical CAD (Computer-Aided Design) system using the current version of the AutoCAD software. Content stresses additional CAD commands and command sequences to produce technical drawings. Students transition from 2-dimensional drawings to isometric drawings and finally, to 3-dimensional modeling. Emphasis in level 2 is placed on 3-dimensional mechanical design culminating in a comprehensive assembly drawing project that includes part simulation. Students are also introduced to prototyping through the in-class beginner usage of 3D printers. Opportunity is given for students to add to their design portfolios to present student work in an attractive, professional format.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Computer Aided Design 1

## Computer Science:

### AP Computer Science Principles

AP Computer Science Principles offers students an introduction to computer science through programming. Key topics covered in this course encompass problem-solving solution design, organizing extensive data sets using data structures, crafting, and executing algorithms for data processing and insights discovery, analyzing potential solutions, and exploring the ethical and social dimensions of computing systems. The curriculum emphasizes object-oriented programming and design, utilizing languages like Java, JavaScript, Python, and CSS.

- **Open to:** Grades 10-12 with teacher approval
- **Prerequisite Course(s):** None

### Coding

In today's world, coding is everywhere, powering apps on phones, tablets, and computers. This course introduces students to programming basics through hands-on projects. Working on these projects helps students develop important skills like problem-solving, presentation abilities, and resilience. This course is open to students without any coding or technological background, preparing them for a variety of job opportunities in fields such as software development, web development, and more.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

### Game Design & Development

The Game Design & Development course teaches the basics of creating video games with JavaScript. We cover computer science fundamentals and programming basics, focusing on enhancing logical thinking and problem-solving skills. By the end of the course, students will be proficient in JavaScript programming. All students, especially those interested in technology careers, are encouraged to join!

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None



## English:

### **AP English Language & Composition**

The AP Language and Composition course offered by the College Board is an exciting opportunity for high school students to develop their skills in reading, writing, and critical thinking. This course is designed to prepare students for college-level work and to help them become effective communicators in various academic and professional settings. Throughout the course, students will engage in rigorous reading and writing activities, analyze complex texts, and develop their own persuasive arguments. *This course would fulfill your English 11 or English 12 requirement.*

- **Open to:** Grades 11 & 12 with teacher approval
- **Prerequisite Course(s):** None

### **AP English Literature & Composition**

AP English Literature and Composition is an introductory college-level literary analysis course. Students cultivate their understanding of literature through reading and analyzing texts as they explore concepts like character, setting, structure, perspective, figurative language, and literary analysis in the context of literary works. Book lovers only, apply. *This course would fulfill your English 12 requirement.*

- **Open to:** Grade 12 with teacher approval
- **Prerequisite Course(s):** None

### **Communications**

Students will develop an understanding and application of the techniques used in communicating and public speaking skills. This course is intended to engage students learning through hands-on projects and real-world activities. Additionally, students will develop formal public speaking skills beneficial to them in the professional world, including listening, speech preparation, PowerPoint creation, and research methods. Activities involve preparing speeches to inform, entertain; storytelling; and the interpretation of famous speeches.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

### **Creative Writing**

This course will take an in-depth look at the ways you can become the next great American writer! Study the universal ideas and techniques behind writing short stories, poetry, novels, and creative nonfiction. Discover your voice as you learn to hone your skills as a technical and imaginative author within each different genre. At the same time, visit modern novels and learn the tricks behind creating memorable scenes as you create your first great work! At the conclusion of this course, students will be able to demonstrate mastery of the art of storytelling through creative literary devices.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## **Drama**

A semester course that will help students develop acting skills and theater knowledge. Activities will guide students' learning about basic acting, character development, voice expression along with technical theater, terminology, and theater history. Class members will participate in scenes, improvisation, and monologues. Drama is considered a great help in building public speaking skills, self-confidence, and poise. By course end, students will enhance their understanding of play structure, scene study, improvisation, stage movement, Public Speaking skills, and acting knowledge.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## **Writing Composition**

Want to share your thoughts? Become a great writer and tell your story? Do it with Writing Composition! The greatest writers and the strongest, most forceful, and evocative writing use elements of composition. Writing Composition is designed to give you the tools to persuade others, convince potential employers you are the best choice for the job, and develop your personal style. You will learn structure, style, emotion, and conversation over a variety of writing genre. In this class students will be able to complete the various types of writing that may be required in a professional/business setting. At the semester's end, students will have a portfolio that can prepare them for any post-secondary plan.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None

## Foreign Language:

### **Italian Language 1**

One may not realize it, but Italian language is all around us. Despite having a relatively small number of speakers, Italian food, art, opera, sports, and culture in general have given people all over the world basic access to one of the most spoken European languages. In this course you will learn how to greet others, describe yourself and your surroundings, and talk about topics such as your school, home, likes, dislikes, sports, and your community. You will learn the basics of speaking, reading, writing, and listening in the present tense. You will be given the tools to deal with elementary Italian and be provided with an Italian partner with whom you will be paired to practice in a virtual exchange set-up.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

### **Italian Language 2**

After achieving an understanding of basic linguistic and communicative skills and features of Italian, students will be able to deepen their understanding of the language with a stronger focus on communication and interaction. Week after week you will expand your knowledge of language and culture through, among others, Italian contemporary music, literature, and cinematographic heritage. Through the development of Italian Language 2, students will understand differences and similarities between US and Italian contemporary culture. Students will also gain soft skills in multicultural communication and interact with current events, trends, shows, music, and films from Italy.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Italian Language 1

### **Italian Language 3 (beginning 2025-2026 school year)**

Italian Language 3 is designed to deepen students' proficiency in the Italian language and foster a deeper understanding of Italian culture. Building upon the foundational skills acquired in Italian Language 1 and 2, this course emphasizes advanced grammar, vocabulary expansion, and complex linguistic structures. Through interactive activities, and authentic materials such as literature excerpts, music, and film clips, students will refine their reading, writing, speaking, and listening skills. Additionally, students will explore various aspects of Italian culture, including its rich history, traditions, and contemporary society, enhancing their cultural awareness and appreciation. By the end of the course, students will be equipped with the linguistic proficiency and cultural insights necessary to engage meaningfully with Italian-speaking communities and pursue further studies in Italian language and culture.

- **Open to:** Grade 12 with teacher approval
- **Prerequisite Course(s):** Italian Language 1 & Italian Language 2

### **Spanish Language 1**

In Spanish Language 1, through a dynamic blend of interactive lessons, engaging activities, and cultural exploration, students develop foundational skills in listening, speaking, reading, and writing Spanish. From basic vocabulary acquisition to the introduction of grammar concepts, this course lays the groundwork for effective communication in real-world contexts. Students not only gain proficiency in language mechanics but also cultivate an appreciation for the diverse cultures and traditions of Spanish-speaking communities worldwide. Through authentic experiences and personalized feedback, learners are empowered to confidently navigate the Spanish language landscape, setting the stage for continued growth and exploration in subsequent levels.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

### **Spanish Language 2 (beginning 2025-2026 school year)**

In Spanish Language 2, students will continue to develop their proficiency in Spanish through engaging activities and interactive lessons. Building upon the foundations established in Spanish 1, this course will focus on expanding vocabulary, improving grammar skills, and enhancing communication abilities in both spoken and written Spanish. Students will delve deeper into various cultural aspects of the Spanish-speaking world, gaining a greater appreciation for the diversity and richness of Hispanic culture. With a blend of authentic materials, immersive experiences, and meaningful projects and assessments, students will emerge with heightened confidence and competence in their Spanish language skills, preparing them for further study and real-world communication opportunities.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** Spanish Language 1

## Mathematics:

### **Algebra 2**

In Algebra 2, students will expand upon the topics they learned in Algebra 1. The course focuses on simplifying expressions, solving equations, and graphing of quadratics, higher-degree polynomials, and radical functions. Students will also apply their skills to real-world applications of the topics studied. Successful completion of the course will prepare students to take Precalculus.

- **Open to:** Grades 10-12
- **Required materials:** Scientific calculator (TI-30XS Multiview recommended)
- **Prerequisite Course(s):** Algebra 1

### **AP Precalculus**

In AP Precalculus, students explore everyday situations and phenomena using mathematical tools and lenses. Through regular practice, students build deep mastery of modeling and functions, and they examine scenarios through multiple representations: graphical, numerical, analytical, and verbal. They will learn how to observe, explore, and build mathematical meaning from dynamic systems, an important practice for thriving in an ever-changing world. The skills obtained in AP Precalculus prepare students for higher-level mathematics and science courses and help students interested in STEM majors develop an exceptionally strong foundation for calculus, which is the launchpad for most STEM majors.

- **Open to:** Grades 11-12 with teacher approval
- **Required materials:** Graphing calculator (TI-84 recommended)
- **Prerequisite Course(s):** Algebra 2

### **Honors Calculus**

Students will develop an appreciation for calculus as they explore a multi-representational approach to calculus with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. Students will explore graphs, functions, limits, and derivatives, with real world applications of engineering, economics, physics and other sciences. Students will discover relationships between mathematical concepts using hands-on activities and build on the courses they have previously taken.

- **Open to:** Grades 11-12 with teacher approval
- **Required materials:** Graphing calculator (TI-84 recommended)
- **Prerequisite Course(s):** Precalculus and Trigonometry

### **Honors Trigonometry**

Trigonometry is one of the most valuable branches of mathematics. It is a different subject than most of the math you have encountered in previous studies. Trigonometry opens a link to higher maths and sciences and has applications in STEM fields. This class will help prepare students for Calculus and college mathematics courses. Within this course students will investigate, analyze, and explore trigonometric functions, the unit circle, graphs, trigonometric identities, and trigonometric equations. Through the study of trigonometry, students will develop skills through making connections, problem solving, critical thinking, efficiency, and developing coherent, logical arguments.

- **Open to:** Grades 11-12 with teacher approval
- **Required materials:** Scientific calculator (TI-30XS Multiview recommended)
- **Prerequisite Course(s):** Geometry and Algebra 2

## Precalculus

In precalculus, we expand and build on the mathematical foundations that you have learned through the years. We will be taking an in-depth look at rational functions, exponential functions, logarithmic functions, and analyzing functions in a general sense. Throughout this course, students will be performing calculations, using vocabulary, discovering, and applying mathematical principles, thinking logically, and translating real-life situations to mathematical models, obtaining solutions, and then translating solutions back again into real-life contexts. This class is meant to set you up to be successful in calculus and college mathematics.

- **Open to:** Grades 10-12
- **Required materials:** Scientific calculator (TI-30XS Multiview recommended)
- **Prerequisite Course(s):** Algebra 2

## Probability & Statistics

This course will offer a hands-on introduction to important topics in statistics by focusing on the statistical thinking behind data collection and analysis. It will help students be more discerning consumers of statistics, teaching them to interpret the numbers in surveys, election polls, and medical studies. Topics will include sampling, surveys, experimental design, organizing data, distributions, probability, and inference. Students looking to go into a business, medical, science, or math-based field are highly encouraged to take this course.

- **Open to:** Grades 10-12
- **Required materials:** TI-84 graphing calculator with current operating system
- **Prerequisite Course(s):** Algebra 2

## Trigonometry

Trigonometry is designed to be taken after the completion of Algebra 2 and Geometry and is designed for students who are looking to better understand trigonometric functions in preparation for their studies of Calculus. Students will analyze, apply, and illustrate the properties of the unit circle, determine trigonometric values, calculate the transformations of trigonometric functions, graph trigonometric functions on the coordinate plane, and utilize and apply trigonometric identities.

- **Open to:** Grades 11-12
- **Required materials:** Scientific calculator (TI-30XS Multiview recommended)
- **Prerequisite Course(s):** Geometry and Algebra 2

## Physical Education:

### Empowerment through Movement and Mindfulness

Empowerment through Movement and Mindfulness is a high school level gym class designed to integrate physical activity with mindfulness practices to foster personal growth, resilience, and well-being. This course emphasizes the connection between the mind and body, aiming to empower students to develop a deeper understanding of themselves while enhancing their physical fitness and mental resilience.

- **Open to:** Grades 10-12
- **Required Materials:** Students will be required to purchase a gym uniform
- **Prerequisite Course(s):** None

## Exercise & Fitness

At the end of this class students will be able to understand, identify, and participate in a multitude of aspects of physical fitness and exercise. Students will be able to develop a personal workout program based on their goals and ability.

- **Open to:** Grades 10-12
- **Required Materials:** Students will be required to purchase a gym uniform
- **Prerequisite Course(s):** None

## Sports and Games

Students will participate in a number of games and sports during the semester to provide a basic understanding of each activity. Students will learn the rules and regulation of activities, participate in a variety of “normal” and modified activities, and foster sportsmanship and “fair play”.

- **Open to:** Grades 10-12
- **Required Materials:** Students will be required to purchase a gym uniform
- **Prerequisite Course(s):** None

## Science:

### AP Biology

This course discusses advanced molecular biology topics leading to the AP exam or other advanced study. Course topics include biochemistry, cellular signaling, regulation of the cell cycle, genetics, protein synthesis, and genetic engineering. Students will also explore cellular biology, cellular energetics, natural selection, population genetics, phylogeny, and ecology. The laboratory component of the course is centered on student-driven inquiry comprising at least 25 percent of instructional time. After completion students will be prepared to take the AP Biology exam.

- **Open to:** Grades 10-12 with teacher approval
- **Prerequisite Course(s):** Chemistry

### AP Chemistry (beginning 2025-2026 school year)

The AP Chemistry course provides students with a college-level foundation to support future advanced coursework in Chemistry. Students cultivate their understanding of chemistry through inquiry-based investigations, as they explore content such as: atomic structure, intermolecular forces and bonding, and chemical reactions. Students will also investigate content such as: kinetics, thermodynamics, equilibrium, and acid-base reactions. After completion students will be prepared to take the AP Chemistry exam.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Chemistry

### Chemistry

Chemistry builds on topics learned in the Chemistry portion of physical science and explores additional topics such as chemical reactions, stoichiometry, solutions, acids and bases, gas laws, and thermodynamics. If you have an interest in a career in any field of science, this course will help you to be successful in completing your degree. It is a prerequisite for the AP Chemistry and the AP Biology courses.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** Physical Science

## **Food Science**

Chemistry in food determines smell, taste, look, texture, and even quality of food. Food chemistry is an interdisciplinary subject in which the engineering, biological, and physical sciences are used to study the nature of foods, the causes of food spoilage, how food is processed and packaged, as well as the way food production has changed over time.

Students will engage with hands-on activities, projects, and problems that simulate situations found in the food science and safety industry. Students will investigate areas of food science including food safety, food preparation, and food processing.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None

## **Honors Anatomy & Physiology**

The Anatomy & Physiology course is designed for the student who is interested in pursuing a career in one of the health sciences fields, as well as the student who wants to better understand the biology of human beings. We will focus on exploring and understanding the way that organ systems work together to keep a stable environment in the body.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Biology

## **Honors Forensics**

Forensics is not about one body of science. Rather, it is about how a host of sciences, and the knowledge accumulated by those who study forensics are applied to a goal. The goal is always to analyze criminal evidence and then present the results accurately for a court of law. In our class we will review history, learn different fields within forensics and then apply them to laboratory activities. Like any science, forensics knowledge not only builds on itself but also on previous science courses taken (Biology and Chemistry primarily). This course is designed for students to demonstrate scientific analysis used on different types of evidence through various laboratory experiments.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Biology

## **Honors Physics**

The Honors Physics course provides students with a foundation to support future advanced coursework in physics using advanced math concepts. Honors Physics includes the study of motion, forces, energy, heat, light, electricity, and magnetism. Each topic is explored through laboratory exercises, teacher demonstrations, and student problem solving exercises.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Algebra 2

## **Nutrition & Health**

This course focuses on promoting a healthy lifestyle. Students will study the functioning of their body and the importance of making wise decisions to protect their health and well-being. Students will touch on topics such as drugs, alcohol, sexual relationships, diet, and exercise.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None

## **Principles of Engineering & Design**

Principles of Engineering and Design will expose students to the engineering process through a series of hands-on learning experiences. Students will learn how to solve problems using techniques utilized in engineering, as well as be exposed to several forms of communications used by engineers, such as mechanical drafting.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## **Wildlife Science & Conservation**

This course will explore what wildlife is and introduce the models of conservation in North America. Students will explore each kingdom and learn to identify species using dichotomous keys, prints, leaves, feathers, skin, pelts, skulls, etc. Students will be able to research relationships between animals and each other as well as the impact of abiotic factors, native species, invasive species, and their habitat on population success and distribution.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None

## **Social Studies:**

### **African American History**

Let's take a journey through African American history! In this African American History course, students will be able to enhance their learning about the African American experiences, contributions, and struggles that have shaped the United States and the world. The course will cover topics such as the transatlantic slave trade, the abolitionist movement, the Civil Rights Movement, and the ongoing fight for racial justice and equality, while highlighting the social, political, economic, and cultural aspects that have shaped African American communities and identities. Students will have the opportunity to learn about the resilience, creativity, and resistance that have been a key aspect in the empowerment of African American people. This course will focus on the cultural values and hardships of African American people as it relates to black activists, the artistic time period of the Harlem renaissance or the inspirations of the civil rights movement. You will have the opportunity to see and learn about black history in a new perspective while challenging stereotypes and uncovering hidden stories.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

### **AP United States History**

This course is the most exciting, most complete study of US History you will ever take. It is designed to introduce you to people and places all across this nation, from the indigenous peoples present in 1491, all the way to the mosaic of peoples that make up the country today. During this quest, students will develop and use the same skills and methods used by real historians. In addition, this course will help prepare you to live and interact in a dynamic country that is always changing. The course will also give you a chance to earn college credit by taking the AP US History exam in the spring.

- **Open to:** Grades 10-12 with teacher approval
- **Prerequisite Course(s):** None



### **AP World History: Modern**

This exciting course is designed to introduce you to people and places you have never seen; in every part of the world from 1200 to the present. During this quest, students will develop and use the same skills and methods used by real historians. In addition, this course will help prepare you to live in a world that is becoming increasingly global, by helping you to understand differences among people and how to be a good neighbor and citizen. The course will also give you a chance to earn college credit by taking the AP World History Modern exam in the spring.

- **Open to:** Grades 10-12 with teacher approval
- **Prerequisite Course(s):** None

### **Child & Adolescent Psychology**

Child and Adolescent Psychology is a course designed for students looking into majors and careers in education, psychology, speech pathology, or with young people in general. We will examine the physical, behavioral, social, emotional, moral, and cognitive development of infants, children and adolescents, focusing on their application in various settings. Prepare to enhance your critical thinking skills as we bridge the gap between psychological theories and practice through student-centered instruction, research, engaging activities, hands-on projects, real-life scenarios, and interactive discussions. Get ready to unlock more secrets of the mind in this next-level psychology course.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Intro to Psychology

### **Criminal Justice**

In this course students will learn about the U.S. criminal justice system from arrest through the trial process. Students will learn about both civil and criminal law and examine many different career opportunities that exist in the field of criminal justice. Topics include the historical evolution of law, careers in criminal justice, crime in America, criminal investigations, the U.S. prison system, and much more.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

### **Intro to Psychology**

Introduction to Psychology is a course designed to introduce you to the captivating world of human behavior and thinking. Throughout the course, we will explore concepts of the self, and why humans do the things they do. Through thought-provoking discussions and interactive activities, you will discover psychological principles and learn to apply them to your own experiences as well as those of others. Prepare to explore the mysteries of the mind and gain a deeper understanding of yourself and the world around you.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## **Mock Trial**

The Mock Trial class will offer students the ability to dive into cases from the investigation process all the way until the jury reaches a verdict. Students will learn all the steps and rules of a trial and use that knowledge to “perform” their own trials. Students will play the roles of lawyers, jury members, witnesses and more in a court room setting. The course will emphasize reading, writing, listening, and public speaking.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Criminal Justice

## **Philadelphia History**

Whether you have lived here your whole life, or whether Philadelphia has recently become your home, this course will help you more fully appreciate everything the “City of Brotherly Love” has to offer. Throughout this course students will have an opportunity to learn about the most significant changes that have come to the city over the years and how different groups of people have all contributed to its rich history. In addition, we will be exploring the unique history of different neighborhoods and will also be thinking about the Philadelphia of the future. Along the way we will have opportunities to explore the sports, cultural, musical, and social life of the city as well, so you can take advantage of everything available to you as a citizen of this great city.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## **World Cultures**

World Cultures is a course designed for students interested in traveling the globe. We will explore the various peoples and places of the world through projects, discussions, and experience-based learning. The goal of this course is to broaden students’ understanding of geography, culture, and the modern world. Reading and writing-based assignments in this course are meant to challenge students academically and philosophically to engage with the world around them on a deeper level.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None

## **World History**

A history of major world civilizations designed to explore the development of the modern global community and the spread of ideologies and cultures. Students will analyze transnational themes. Those themes will provide connections which promote the use of critical historical, global, and economic literacy skills to explore global patterns of change over time. Acquiring these skills will enable students to analyze and interpret historical events in depth and to apply their understanding to a variety of historical contexts.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None