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)
**Suggested Course(s): Any course listed in this category is not mandatory however it will likely enhance your preparedness and overall appreciation for the course.
***(WI) indicates the course is writing intensive

English:

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
- **Suggested Course(s):** Digital Marketing
- **Other Course Fulfillment:** Business
- **Course Video:** https://youtu.be/2WOq6X1ZIxw

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. (WI)

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/BZjpKLxwJbw

Mythology
In this course, students will develop a cross-cultural perspective on myths, mythologies, and folklore spanning cultures such as Greek, Mesopotamian, Norse, African, and those of the Americas. Students will explore different theories of the cultural meanings and functions of myth, past and present, and how they affect civilizations around the world. (WI)

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/xY40PbvkBnc

American Literature
In American Literature, students will read an overview of American literature from the modern era to contemporary texts. Selected pieces will analyze the social and historical settings to gain a better understanding of the reading. The course is designed to analyze the American Dream as well as the American identity from the perspective of multi-cultural writers. Writing assignments will include journal entries, creative writing, literary analysis essays, a persuasive research paper, as well as project-based assessments related to longer texts. The course will continue to improve skills learned in English 9 and English 10 such as reading, writing, speaking, listening, and critical thinking skills. (WI)

- **Open to:** Grade 12 **2023-2204 school year only**
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/0dUZ20kPAy8

Honors American Literature
In Honors American Literature, students will read an overview of American literature from the modern era to contemporary texts. Selected pieces will analyze the social and historical settings to gain a better understanding of the reading. The course is designed to analyze the American Dream as well as the American identity from the perspective of multi-cultural writers. Writing assignments will include journal entries, creative writing, literary analysis essays, a persuasive research paper, as well as project-based assessments related to longer texts. The course will continue to improve skills learned in English 9 and English 10 such as reading, writing, speaking, listening, and critical thinking skills. (WI)

- **Open to:** Grade 12 with teacher approval **2023-2204 school year only**
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/0dUZ20kPAy8

Advanced Study of Fiction
This course will compose of a study of the entire genre of fiction. Emphasis will be placed on fiction of the 19th and 20th centuries. The Study of Fiction is designed to sharpen your skills as a critical reader. You explore both short stories and novels. We will learn about the various elements that shape the way we read texts - structure, narrative voice, character development, novelistic experimentation, historical and political contexts, and reader response. Upon completion of this course, students may choose to take the AP English Literature and Composition exam. (WI)

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Creative Writing
- **Course Video:** https://youtu.be/BXjbNtRdD9U

Contemporary Literature
This class will focus on a variety of contemporary and twentieth century novels, short stories, and poetry in their historical content. Recurrent themes in contemporary literature will be investigated. Close reading, analysis, and discussion are important parts of this class. Writing assignments, reports, projects, and extra readings to enhance and expand our understanding of contemporary literature will also occur during this course. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/vNadS51VbXY

Honors Contemporary Literature
This class will focus on a variety of contemporary and twentieth century novels, short stories, and poetry in their historical content. Recurrent themes in contemporary literature will be investigated. Close reading, analysis, and discussion are important parts of this class. Writing assignments, reports, projects, and extra readings to enhance and expand our understanding of contemporary literature will also occur during this course. After completion students may choose to take the CLEP exam for English Literature and/or Analyzing and Interpreting Literature. (WI)

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/vNadS51VbXY

Advanced Language and Composition
In this course students will develop evidence based analytic and argumentative writing skills so they may analyze the rhetoric of nonfiction texts and synthesize research representative of diverse perspectives in order to form their own position on a topic. After completion students may choose to take the AP English Language and Composition exam and/or the CLEP exam for Writing Composition and/or Writing Composition Modular. (WI)

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/nSypwx1dg7A

YA (Young Adult) Literature
Young Adult literature (fiction) has exploded and is reaching the teenage demographic due to engaging stories and emphasis on real-life experiences in a voice that is relatable. In this course students will read novels with coming-of-age themes while focusing on important literary aspects. The class will be an open space for discussions with literary narratives that reflect human experiences where we analyze the social, cultural, generic, and media influences of these (and on these) texts. In addition to reading and analyzing YA novels written by a diverse group of authors, we will also read and watch other young adult texts, including films, television shows, and fan works. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested 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 conclusion of the semester students will have a portfolio that can prepare them for any post-secondary plan. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/Ty-s-7cnWqc

Debate
Debate covers a variety of styles of public speaking and formal debate. Students will work on developing research skills including evaluating sources, organizing, and developing evidence-based arguments, and write and present their speeches and debates. Each unit will culminate in performance assignments that require students to demonstrate their abilities within the classroom setting. This class is writing/research intensive and where students have the opportunity to regularly speak in front of the class, both as an individual as well as part of a team. (WI)

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

Drama
A semester course that will endeavor to help students develop acting skills and theater knowledge. Activities will guide student 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
- **Suggested Course(s):** None

Sports in Literature
This course is a literature-based course that examines sports in literature, specifically focusing on the culture of sports and how it impacts cultural identity, American history, pop culture, and the human condition. Students are expected to read a variety of sports-based texts: realistic fiction, non-fiction, biographies/autobiographies, poetry, newspaper, journal, magazine, and online articles. Themes that will be studied will include leadership and character, ethics, success and failure, identity, heroes, rivalries, current events, teamwork, and the pursuit of excellence.

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

Foreign Language:

Foreign Language – Rosetta Stone
Franklin Towne is pleased to partner with Rosetta Stone to offer world language in a variety of languages. Students can choose from any one of the following:

Chinese (Mandarin) **with approval	French	German	Spanish

These classes are asynchronous, and students will only be required to attend in school sessions at the beginning of the semester and if they are not meeting check points. All students will receive instruction in vocabulary, pronunciation, grammar, reading, speaking, listening, and writing. Rosetta Stone is a powerful learning tool that provides students with an immersive, interactive, and engaging language-learning experience. This is a pass/fail class that does not have either a quarterly or final exam.

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

Italian Culture
Would you like to take a virtual trip of Italy? The Italian Culture class will bring you to the canals of Venice, to the beautiful Italian coasts and to the streets of ancient Rome. Italian contemporary art, music, traditions and brands will bring you to Italy as it is today, and a three month long virtual exchange with peers from an Italian High School will show you life in Italy from the perspective of a peer. This is the closest you will get to traveling without leaving our classroom.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Italian Language 1 and Italian Language 2
- **Course Video:** https://youtu.be/z8nKWDG26DI

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
- **Suggested Course(s):** Italian Culture
- **Course Video:** https://youtu.be/z8nKWDG26DI

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
- **Suggested Course(s):** Italian Culture

Business:

Business Foundations (formerly Business 1)
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
- **Suggested Course(s):** Writing Composition, Communications, Business Math, and Digital Marketing
- **Course Video:** https://youtu.be/6bPq4PhHdkc

Management Concepts
A study of decision-making skills, negotiation tools, social media management, and how to motivate employees from a business and leadership perspective. This class will also incorporate aspects of human resource management including hiring and team building.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** Business Foundations
- **Suggested Course(s):** Writing Composition, Communications, Business Math, Digital Marketing, Accounting 1, and Statistics

Principles of Marketing and Advertising
An application of principles and strategies of marketing and advertising that emphasizes creative decision processes, market research, statistical-based decision making, and historical, social, and economic influences. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** Business Foundations
- **Suggested Course(s):** Writing Composition, Communications, Business Math, Digital Marketing, Accounting 1, and Statistics

Principles of Finance
In this course students will analyze what it takes to finance and operate a business. Students will learn how to pitch to investors and raise funds, what expenses are required to run a business, and how to expand a business while managing risk.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** Business Foundations
- **Suggested Course(s):** Accounting 1

Entrepreneurial Design (Senior Seminar)
This is a project-based, cross-disciplinary course that all Franklin Towne Business students will need to complete. In this course students will take all the skills that they have developed in previous courses and work collaboratively to develop, design, market and pitch a product that would be worthy of commercial development. Students will need to work to develop a fully articulated business plan that will be presented at the end of the course. (WI)

- **Open to:** Grade 12 with teacher approval
- **Prerequisite Course(s):** Business Foundations, Management Concepts, Principles of Marketing and Advertising, and Principles of Finance
- **Suggested Course(s):** Business Math, Accounting 1, Digital Marketing, and Career Readiness

Career Readiness
In Career Readiness, students will prepare for their lives after high school. Practical skills like communication, time management, and leadership increase success in school and in the real world. Students will learn the best ways to apply to jobs, practice interview skills, and write their own resumes and cover letters. Students will conduct career research to figure out what their best choice will be after graduation: college, trade school, military, apprenticeships, internships, or employment. On the job skills like delivering presentations, professional etiquette, evaluating performance, salary negotiation, and business ethics will be discussed.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Communications, Writing Composition, and Financial Math
- **Course Video:** https://youtu.be/6bPq4PhHdkc

Money Management
In this course, students will be provided with the financial knowledge and skills they need to become successful independent adults. Real world topics will include how to do your taxes, opening and operating checking and saving accounts, paying for school, using credit cards, taking out loans, and budgeting. Students will be prepared with the financial decision-making skills they need to thrive in the future.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Financial Math
- **Course Video:** https://youtu.be/6bPq4PhHdkc

Social Studies:

Intro to Psychology
This course is designed to serve as an introduction into the field of psychology. We will study the self and analyze why humans do the things they do. Ultimately you will learn about psychological principles and apply them your own experiences and that of others.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Communications
- **Course Video:** https://youtu.be/MVHTCBJsjvw

Child & Adolescent Psychology
This course is designed for students looking to pursue majors and careers in education, psychology, and speech pathology. We will examine the physical, behavioral, psychosocial, emotional, moral, and cognitive development of children and adolescents as they apply to an educational setting. You will be presented with opportunities for critical reflection, and enhancing connections between theory and practice through instruction, research, techniques, and analysis. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** Intro to Psychology
- **Suggested Course(s):** Communications
- **Course Video:** https://youtu.be/i4jAN_HwLbo

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
- **Suggested Course(s):** Forensics and Intro to Psychology
- **Course Video:** https://youtu.be/1ytnghfYbtI

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. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** Criminal Justice
- **Suggested Course(s):** Forensics, Intro to Psychology, Debate, Communications, and Writing Composition
- **Course Video:** https://youtu.be/1ytnghfYbtI

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
- **Suggested Course(s):** None

World History – Not offered 2023-2024
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. World History is a prerequisite course for those interested in taking Advanced World History.

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

Advanced World History – Not offered 2023-2024
In this course students will study the cultural, economic, political, and social developments that have shaped the world from c. 1200 CE to the present. You'll analyze texts, visual sources, and other historical evidence and write essays expressing historical arguments. After completion students may choose to take the AP World History exam, and/or the Western Civilization I, and/or Western Civilization II CLEP exams.

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

Advanced American History – Not offered 2023-2024
Students will study the cultural, economic, political, and social developments that have shaped the United States from c. 1491 to the present. You'll analyze texts, visual sources, and other historical evidence and write essays expressing historical arguments. After completion students may choose to take the AP U.S. History exam, and/or the History of the United States I, and/or History of the United States II CLEP exams.

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

Mathematics:

Geometry
Although we may not recognize it, we use basic geometry skills regularly in everyday life. For instance, we consider whether a picture on the wall is parallel to the floor, or we calculate the area of a room for new carpeting. Geometry is an integral part of many areas of study. The course starts with basic 2-dimensional figures and then expands to the study of 3-dimensional figures. Emphasis is placed on points, lines, and planes, triangles, quadrilaterals, and circles.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/GmkMUVWFIIg

Honors Geometry
This class is for our accelerated math students. Honors Geometry is an in-depth study of 2 and 3 dimensional figures including representing problem situations using geometric models. Students explore more complex geometric situations and deepen their explanations of geometric relationships, preparing them for Honors Precalculus. Students will be required to purchase a graphing calculator for use in this class.

- **Open to:** Grades 10-12 with teacher approval
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/GmkMUVWFIIg

Honors Geometry 2
Students will strengthen their mathematical reasoning skills in geometric contexts. Within the course, students will begin to focus on more precise terminology, symbolic representations, and the development of proofs, logical argument, and constructions. Independent topic assignments are part of the curriculum.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Geometry
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/VePsgXFFzsc

Precalculus
Precalculus is designed to help achieve success in introductory college math courses. It examines topics such as polynomial, rational, exponential, and logarithmic functions, and properties and behaviors of functions. Students who successfully complete this course may be eligible for Calculus and the Precalculus CLEP exam. Students will be required to purchase a graphing calculator for use in this class.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** Algebra 2
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/GmkMUVWFIIg

Honors Precalculus
Honors Precalculus weaves through the mathematical foundations that students have learned through the years from elementary/middle school, Algebra 1, Algebra 2, and Geometry as they expand their understanding through new mathematical experiences. Students will build their critical thinking abilities using functions, equations, and limits as useful tools as a means for analyzing and understanding a variety of mathematical relationships. Students will use functions to represent and connect mathematical concepts using a variety of representations: numerical, graphical, and analytical. One of the main goals of this course is to prepare the student to be successful in any subsequent math course such as Calculus or college math courses and to take the Precalculus CLEP exam. Students will be required to purchase a graphing calculator for use in this class.

- **Open to:** Grades 10-12 with teacher approval
- **Prerequisite Course(s):** Algebra 2
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/GmkMUVWFIIg

Trigonometry
Trigonometry is designed to be taken after the completion of Algebra 2 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
- **Prerequisite Course(s):** Geometry
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/GmkMUVWFIIg

Honors Trigonometry

Trigonometry is one of the most valuable branches in mathematics. It is a very different subject than most of the math you have encountered in previous studies. Trigonometry opens a link to the math and the sciences and has applications in physics, many sciences, architecture, and engineering. This class will help prepare students for Advanced 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. Students will be required to purchase a graphing calculator for use in this class.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Geometry
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/GmkMUVWFIIg

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. Students who seek to take science or math related courses in college would benefit from taking calculus and those who successfully complete this course will be prepared to take a college calculus course and/or the Calculus CLEP Exam. Students will be required to purchase a graphing calculator for use in this class.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Geometry, Precalculus, and Trigonometry
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/GmkMUVWFIIg

Advanced Calculus 1
Advanced Calculus 1 is comparable to an introductory college-level calculus course. Students will build on all of their previous mathematical knowledge and courses with real-world problems represented graphically, numerically, analytically, and verbally and using definitions and theorems to build arguments and justify conclusions as they explore concepts like change, limits, and the analysis of functions. The course will focus on exploring graphs, functions, limits, derivatives, and integrals by discovering relationships between mathematical concepts and lend itself to careers in engineering, physics and other sciences, economics, higher ed teaching, computer sciences, and software development. Students who successfully complete this course will be prepared to take the AP Calculus AB exam or the Calculus CLEP Exam. Students will be required to purchase a graphing calculator for use in this class.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Geometry, Precalculus, and Trigonometry
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/GmkMUVWFIIg

Advanced Calculus 2
Advanced Calculus 2 is designed to be the equivalent to both first and second semester college calculus courses. Students will build on their previous mathematical knowledge and courses with real-world problems. This course will focus on parametrically defined curves, polar curves, and vector-valued functions, while developing additional integration techniques and applications and introduces the topics of sequences and series. Students who successfully complete this course will be prepared to take the AP Calculus BC exam. Students will be required to purchase a graphing calculator for use in this class.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Geometry, Precalculus, Trigonometry and Advanced Calculus 1
- **Suggested Course(s):** None

Statistics (formerly Data Analysis & Probability)
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. This course is a prerequisite for students interested in the Advanced Statistics courses. Students will be required to purchase a graphing calculator for use in this class.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Other Course Fulfillment:** Business
- **Course Video:** https://youtu.be/rW8Fpu96Qec

Advanced Statistics
This course is designed to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will explore four broad conceptual themes: Exploring data (describing patterns and departures from patterns); Sampling and Experimentation (planning and conducting a survey); Anticipating Patterns (exploring random phenomena using probability and simulation); and Statistical Inference (estimating populations and testing hypotheses). Students who successfully complete this course will be prepared to take the AP Statistics exam. Students will be required to purchase a graphing calculator for use in this class.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Statistics
- **Suggested Course(s):** Intro to Psychology
- **Other Course Fulfillment:** Business
- **Course Video:** https://youtu.be/GmkMUVWFIIg

Financial Math
In this class students will study the daily application of math skills. We will explore concepts pertaining to weekly paychecks and how taxes influence our net pay. We will discuss the concepts of establishing a positive credit score and what influences a negative credit history can make. Financial math will work on budgeting skills and hands on projects like planning for a vacation. This course will provide you with the financial knowledge that you will need to make appropriate decisions for your future.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Money Management and Career Readiness
- **Other Course Fulfillment:** Business
- **Course Video:** https://youtu.be/3J1BYOQwpHQ

Business Math
Business math will give you an introduction to the math concepts that will help you be successful in the business world. Business math will focus on topics that apply to business: budgeting, buying, selling, cash flow, inventory, data presentation, and analysis.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Business Foundations, Management Concepts, Career Readiness, Communications, and Digital Marketing
- **Other Course Fulfillment:** Business
- **Course Video:** https://youtu.be/ezk9uCRBwAA

Medical Math
The Medical Math course contains practical lessons that will help you gain the medical math skills you need for anything from calculating dosages, solution strength, and flow rates to using scientific formulas. Whatever medical field you're in, the hands-on activities in this course will help you perform day-to-day math tasks quickly and easily.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Food Science, Anatomy and Physiology 1, Anatomy and Physiology 2, Nutrition & Health, and Introduction to Medical Assistance
- **Course Video:** https://youtu.be/rW8Fpu96Qec

Accounting 1
Whether you are going to invest in a business, work for a company, or start your own business, you will always use financial information. Accounting is called the language of business and provides financial information to people to help make decisions. In this course we will discuss financial activities as well as analyze and interpret a business' operation to determine its success.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Business Foundations, Management Concepts, Money Management, and Communications
- **Other Course Fulfillment:** Business
- **Course Video:** https://youtu.be/ezk9uCRBwAA

Accounting 2
This advanced course expands on the topics learned in the Accounting 1 course while adding new topics about management accounting, cost accounting, not-for-profit accounting, and financial analysis. In addition, the cost, budgeting, and financial analysis topics are useful tools for the new entrepreneur. Some of the special features of this course include: Business Ethics, Careers in Accounting, Personality Profiles, Spreadsheet Options, and Applied Mathematics. Students who successfully complete this course will be prepared to take the Financial Accounting CLEP exam.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** Accounting 1
- **Suggested Course(s):** None
- **Other Course Fulfillment:** Business

Math for Education
Math for Education is a course for any student that envisions themselves as a future educator, ranging from elementary students to high school math courses. A variety of math topics (i.e. problem solving, number theory, algebra, statistics) will be taught as well as the educational pedagogy and core skills to design successful math lessons for a classroom of students. Within the Math for Education course, students will learn state standards related to mathematics to learn, develop, and plan lessons for K-12 students. This course will also complete observations and follow-up reports to analyze the components of a lesson in the classroom.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Intro to Psychology, Child & Adolescent Psychology, and Communications
- **Course Video:** https://youtu.be/JOly4RxT4YE

Mathematics of Coding
You do not have to be a math genius to be a master coder. However, having a firm understanding and comfortability level with certain math concepts can up your game and help you become a better programmer. In this course we will delve into math to give a fundamental understanding of basic math skills, number systems, functions, basic number theory, statistics and combinatorics, geometry and linear algebra. These skills can enhance your understanding on how computers work and how codes work. This class is for students interested in going into computer science, designing apps, engineering, computer animation, machine learning and artificial intelligence, or enjoy tinkering around with computers and want a better understanding on how they “think”.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Coding
- **Other Course Fulfillment:** Technology
- **Course Video:** https://youtu.be/ui3jqog3zUY

Mathematics of Machine Learning
Artificial intelligence can be applied to solve a boundless set of problems from designing a game of Pac-Man to creating an autonomous assistant for an astronaut and practically everything in between. Machine learning also has a place in creative domains, where art installations often feature artificial intelligence. It is one of the fastest growing fields in math, science, and technology, and math is at the very heart of machine learning. In this course, we will discuss the math behind artificial intelligence and machine learning.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Other Course Fulfillment:** Technology
- **Course Video:** https://youtu.be/ui3jqog3zUY

Linear Algebra
Linear Algebra is the math used in many exciting and emerging fields in science and technology; practically every area of modern science contains models where linear algebra is employed. Concepts learned in linear algebra are crucial to many areas in computer science including graphics, image processing, cryptography, machine learning and artificial intelligence, computer vision, and computational biology. This is an introductory course that serves as a gateway to the study of higher mathematics. We will cover the basic elements of a college-level Introduction to Linear Algebra course, including matrix algebra, determinants, elementary vector spaces, and characteristics equations and eigenvalues. As time and resources permit, students will use computing technologies to create and explore applications of linear algebra.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Web Design and Engineering & Design
- **Other Course Fulfillment:** Technology
- **Course Video:** https://youtu.be/GmkMUVWFIIg

STEM:

Computer Aided Design and Manufacturing 1 (formerly Engineering & Design 1)
CAD-M 1 (computer aided design and manufacturing) is an introductory course covering the operation of a typical CAD system. Content stresses CAD graphic commands, proper manipulation, industrial CAD software and hardware to produce engineering drawings. Emphasis is placed on developing entry-level CAD user skills using the current version of the AutoCAD software. This course is beneficial for those interested in engineering, architecture, interior design, trade skills such as reading and deigning blue prints.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** Algebra 2
- **Suggested Course(s):** Communications, Debate, Statistics, Geometry, and Woodshop 1
- **Course Fulfillment:** Mathematics, Science or Technology

Computer Aided Design and Manufacturing 2 (formerly Engineering & Design 2)
CAD-M 2 (computer aided design and manufacturing) builds on the CAD – M 1 introductory course covering the operation of a typical CAD (Computer Aided Drafting and Design) system. Content stresses additional CAD graphic commands and proper manipulation of industrial CAD software and hardware to produce engineering drawings. Emphasis is placed on finishing the development of entry-level CAD user skills with the current version of the AutoCAD software package. Activities will include things such as: pre-engineer prototyping drawings, model space/paper space drawings, proper pre-engineering drawing procedures and presentation, Inquiry and Help commands, create symbol libraries, section drawings, dimension drawings, isometric drawings; portfolio to present student work in an attractive and professional-looking format.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Computer Added Design and Manufacturing 1
- **Suggested Course(s):** Communications, Debate, Statistics, Geometry, and Woodshop 1
- **Course Fulfillment:** Mathematics, Science or Technology

Computer Aided Design and Manufacturing 3
This course introduces you to the foundational knowledge in computer-aided design, manufacture, and the practical use of Computer Numerical Control (CNC) machines. This course will utilize the design techniques learned in CAD-M1 and CAD-M 2. We will then continue to explore the material and process of manufacturing to create and program physical models of project designs. Students in this course will develop a strong understanding of the design, manufacturing, and programming process that can lead to success in an entry level college engineering course.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Computer Added Design and Manufacturing 1 & Computer Added Design and Manufacturing 2
- **Course Fulfillment:** Mathematics, Science or Technology
- **Suggested Course(s):** Communications, Debate, Statistics, Geometry, Web Design, and Woodshop 1

Science:

Intro to Medical Assistance Careers
The goal of this class is to prepare students for an education in medical related fields such as Nursing Assistant, Home Health Aide, Licensed Practical Nurse, Physician, Therapist, Registered Nurse, or Pharmacy Technician. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Medical Math, Statistics, Communications, and Intro to Psychology
- **Course Video:** https://youtu.be/AaybncWReaw

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. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Communications, Intro to Psychology, and PE – Exercise & Fitness
- **Course Video:** https://youtu.be/CNdCsox5SXo

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. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Criminal Justice and Mock Trial
- **Course Video:** https://youtu.be/mCLjtoKFc74

Chemistry 2
Chemistry 2 builds on topics learned in the Chemistry class 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 Advanced Chemistry and the Advanced Biology courses.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** Chemistry or teacher approval
- **Suggested Course(s):** Statistics, Precalculus, Calculus, Communications, and Debate
- **Course Video:** https://youtu.be/Qy6C-cQ2Qqw

Advanced Chemistry 1
The Advanced Chemistry 1 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. This course is a prerequisite for Advanced Chemistry 2.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Chemistry and Chemistry 2
- **Suggested Course(s):** Statistics, Precalculus, Calculus, Communications, and Debate
- **Course Video:** https://youtu.be/Qy6C-cQ2Qqw

Advanced Chemistry 2
The Advanced Chemistry 2 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: kinetics, thermodynamics, equilibrium, and acid-base reactions. After completion students may choose to take the AP Chemistry exam or the CLEP exam for Chemistry.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Chemistry, Chemistry 2, and Advanced Chemistry 1
- **Suggested Course(s):** Statistics, Precalculus, Calculus, Communications, and Debate
- **Course Video:** https://youtu.be/Qy6C-cQ2Qqw

Evolution
This course covers how organisms and species change over time. Students will learn about evolution, how it works, and how organisms lived. Topics covered include evidence for evolution and how it works, the origin of life, the Cambrian explosion, how new species are formed, and human evolution. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Statistics, Communications, and Intro to Psychology
- **Course Video:** https://youtu.be/U1XN_MCiMTQ

Advanced Biology 1
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. The laboratory component of the course is centered on student-driven inquiry comprising at least 25 percent of instructional time. This course is a prerequisite for Advanced Biology 2 and should be taken during the same year. After completion of Advanced Biology 1 and 2 students may choose to take the AP and/or CLEP exam for Biology.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Chemistry and Chemistry 2
- **Suggested Course(s):** Statistics, Advanced Statistics, Evolution, Communications, Intro to Psychology, Precalculus, and Calculus
- **Course Video:** https://youtu.be/73_yhUU_dpU

Advanced Biology 2
Advanced Biology 2 is designed to be the equivalent of a two-semester college biology lab course that develops both the practice of science and an understanding of the concepts that scaffold biology and connect it to the modern world. The laboratory component of the course is centered on student-driven inquiry comprising at least 25 percent of instructional time. Course topics include cellular biology, cellular energetics, natural selection, population genetics, phylogeny, and ecology. After completion students will be prepared to take the AP and/or CLEP exam for Biology.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Chemistry, Chemistry 2, and Advanced Biology 1
- **Suggested Course(s):** Statistics, Advanced Statistics, Evolution, Communications, Intro to Psychology, Precalculus, and Calculus
- **Course Video:** https://youtu.be/ka3PkgoJvRQ

Physics Topics
If you like the ideas in physics, but not the math behind it, Physics Topics may be for you! We will investigate ocean waves, light and color, sound, astronomy, time travel, and alternative worlds with activities, experiments, and projects.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Communications and Debate
- **Course Video:** https://youtu.be/IM2g4L7nkQ4

Physics 2 – Not offered 2023-2024
The Physics 2 course provides students with a foundation to support future advanced coursework in physics using advanced math concepts. Physics 2 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. Physics 2 will prepare you for STEM based majors. Students considering Advanced Physics should take Physics 2. (WI)

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Physics
- **Suggested Course(s):** Statistics, Precalculus, Calculus, Communications, Debate, and Engineering and Design
- **Course Video:** https://youtu.be/IM2g4L7nkQ4

Advanced Physics 1 – Not offered 2023-2024
This course will cover the 1st half of the AP Physics 1 test (algebra-based). The main areas of study will be kinematics, dynamics, circular motion, gravity, and energy. Most of these topics will have been covered in Physics 2 but the depth and detail will expand tremendously.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Physics and Physics 2
- **Suggested Course(s):** Statistics, Precalculus, Calculus, Communications, and Debate

Advanced Physics 2 – Not offered 2023-2024
This course will cover the 2nd half of the AP Physics 1 test (algebra-based). The main areas of study will be momentum, simple harmonic motion, torque, and rotational motion. Most of these topics will have been covered in Honors Physics but the depth and detail will expand tremendously. After completion students may choose to take the AP Physics 1 test (algebra-based).

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Physics, Physics 2 and Advanced Physics 1
- **Suggested Course(s):** Statistics, Precalculus, Calculus, Communications, and Debate

Anatomy & Physiology 1
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. (WI)

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Statistics, Communications, Intro to Psychology, Precalculus, and Calculus
- **Course Video:** https://youtu.be/VHB9RzF1les

Anatomy & Physiology 2
This course will explore normal functioning, structure and pathophysiology of major organ systems. We will continue to focus on exploring and understanding the anatomical/physiological systems of the body, the interrelationship of the systems, and the necessity of homeostasis. This course will focus on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. Lab components will provide a hands-on learning experience for exploration of basic physiology. (WI)

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Anatomy & Physiology 1
- **Suggested Course(s):** Statistics, Communications, Intro to Psychology, Precalculus, and Calculus

Environmental Science – Not offered 2023-2024
This is an introductory class where students will study Earth's ecosystems and natural resources, how humans interact with other species, and use natural resources. Students will also explore the challenges we humans face in sustaining life on Earth for future generations, such as pollution, food scarcity, and loss of biodiversity/natural habitats. (WI)

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

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
- **Suggested Course(s):** Culinary 1, Culinary 2, and Culinary 3

Heredity & Human Genetics – Not offered 2023-2024
This course discusses the principles of genetics with application to the study of biological function and the level of molecules, cells, and organisms. Students will explore the role of genes in inheritance of traits, genetic diseases/disorders, and learn to integrate the most important concepts in classical and molecular genetics into an overall picture of what a gene is, and how it functions. This course provides an overview of human genetics concepts including Mendelian and non-Mendelian inheritance, the molecular basis of human variation and disease susceptibility, and chromosome variation. Students will also explore the way we diagnose and treat diseases with new technologies enabled by a deeper understanding of the human genome and its relationship to health and disease. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Statistics, Communications, and Intro to Psychology

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. (WI)

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Statistics and Debate

Independent Study – Community-Based Learning – Not offered 2023-2024

- Community-based learning is a form of instruction that takes place in the "real world" and where a student learns by doing. This means that students can earn credit exploring careers and interests, working in an intern/paid position, or doing community service. The student's individual experience serves as the primary content for Educational Field Experience, Cooperative Work Program, and Community Service Learning. All the community-based learning programs are excellent preparation and assistance for the senior project, as well as for future college and work opportunities. Students secure a service placement, internship, or work in a science community service position at a site with a supervisor. The program coordinator must approve any summer hours that the student might have an opportunity to complete, and that approval must be made in the spring prior to beginning the course.
    - **Open to:** Grades 11-12 and teacher approval
    - **Prerequisite Course(s):** Any science elective
    - **Suggested Course(s):** None

Independent Study – Research Project – Not offered 2023-2024

- Students will choose a research project inspired by a previous science class or an interest in a specific topic falling under the 3 main branches of science: Biology, Chemistry, and Physics (Physical Science). The project will culminate in a written project and oral presentation. All work is conducted under the supervision of a teacher, but the work will primarily be completed independently.
    - **Open to:** Grades 11-12 and teacher approval
    - **Prerequisite Course(s):** Chemistry, Chemistry 2, and one additional science elective
    - **Suggested Course(s):** None

Technology:

Computer Graphic Design
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 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Art Foundations, Geometry, Writing Composition, Communications, Debate, and Creative Writing
- **Course Video:** https://youtu.be/o9XhuMUmLag

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. This is a College Level course.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Computer Graphic Design
- **Suggested Course(s):** Art Foundations, Geometry, Writing Composition, Communications, Debate, and Creative Writing

Coding – Python
Coding is in almost every aspect of modern life. Every application on a phone, tablet, or computer uses computer languages to run. Students will learn about programming fundamentals by applying coding concepts in projects. Working on complex projects also allows students to practice important skills like program architecture, debugging, creativity, problem solving, teamwork, presentation skills, resilience, and authentic learning. Coding will help to prepare students for jobs that include software application developer, web developer, computer systems engineer, business intelligence analyst, computer programmer, and many more.

- **Open to:** Grades 10-12 with teacher approval
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Geometry, Writing Composition, Communications, Debate, and Creative Writing
- **Course Video:** https://youtu.be/48rZDS-8sH4

Web Design
This course is a hands-on introduction to programming language concepts and techniques. Students will learn how to construct basic websites, 2D video games, algorithms, as well as write computer programs using basic types, loops, and conditionals. Students will be able to choose from various languages – HTML/CSS and JavaScript.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Geometry, Writing Composition, Communications, Debate, and Creative Writing
- **Course Video:** https://youtu.be/SQ0UZd4R6dE

Advanced Computer Science Principles
This course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts. The course also provides the opportunity to use current technologies to create computational artifacts for both self-expression and problem solving. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science, cybersecurity, web development, and software engineering. Upon completion students may choose to take the AP Computer Sciences Principles exam.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Coding or Web Design
- **Suggested Course(s):** Geometry, Writing Composition, Communications, Debate, and Creative Writing

Digital Marketing
Students will become familiar with the principles and functions of marketing and the skills needed to succeed in marketing programs of study and careers. Course content includes the marketing concept, the marketing mix and legal and ethical issues faced by online marketers. Students will practice product development and decision-making regarding a product, pricing, promotion, and distribution. Students will participate in case studies and will also create digital media (website, blog, chat bot) and social media for campaigns, press releases, and other promotional materials. Students will also analyze the impact of social media as an element of promotional campaigns.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Business Foundations, Principles of Marketing and Advertising, Geometry, Writing Composition, Communications, Debate, and Creative Writing
- **Other Course Fulfillment:** Business
- **Course Video:** https://youtu.be/Pq_cZ4se81c

Game Design & Development
Students will develop digital games (ex. Arcade, Car Racing) or educational computer learning simulations (ex. Healthcare, Biology). Students will create a Game Developers document. Students will be responsible for Game Programming (game mechanics, game physics, character movement, UI score, and health). Computer Science students would be required to have solid background in a text-based language (JavaScript or Python). Game Art (Environment and UI graphics) will also be taught.

- **Open to:** Grades 11-12
- **Prerequisite Course(s):** Coding or Web Design
- **Suggested Course(s):** Geometry, Writing Composition, Communications, Debate, and Creative Writing

Related 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 10-12
- **Required Materials:** Sketchbook (purchased from school store)
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/CJvEjU2NoUk

Art Studio
Art Studio continues the path of Art Foundations with a stronger emphasis on studio art and methods. The class will be structured around project-based learning and will include practice in a variety of techniques. There is a large focus on sculptures and painting. Students will experiment with a range of materials in developing their own artistic style and portfolio.

- **Open to:** Grades 11-12 with teacher approval
- **Required Materials:** Sketchbook (can be purchased from school store)
- **Prerequisite Course(s):** Art Foundations
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/CJvEjU2NoUk

Community Arts
Community Arts is an upper-level art course focusing on large scale artwork and the beautification of the Franklin Towne Community. In this project-based course students will plan, sketch, and create murals in and around Franklin Towne. Students will learn different methods, including gridding, projecting, and tracing to create enlarged art. Students will also decorate for large scale events to create an overall display and installation. Community relevance and the visual effects murals have on an audience will be of focus.

- **Open to:** Grade 12 with teacher approval
- **Required Materials:** Sketchbook (can be purchased from school store)
- **Prerequisite Course(s):** Art Foundations and Art Studio
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/Bl7lA4suAaE

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 lives 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 11-12 with teacher approval
- **Required Materials:** Sketchbook (can be purchased from school store)
- **Prerequisite Course(s):** Art Foundations
- **Suggested Course(s):** Art Studio
- **Course Video:** https://youtu.be/_0verMjaWhU

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 11-12 with teacher approval
- **Required Materials:** Sketchbook (can be purchased from school store)
- **Prerequisite Course(s):** Art Foundations
- **Suggested Course(s):** Art Studio
- **Course Video:** https://youtu.be/_rppVCl2sgc

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)
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Art Foundations

Pep Band 1 (formerly Contemporary Music)
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 10-12 & may enroll again if previously taken with teacher approval
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None

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 11-12 with teacher approval & may enroll again if previously taken with teacher approval
- **Prerequisite Course(s):** Pep Band 1
- **Suggested Course(s):** None

Jazz Performance
This course is designed as a college preparatory course for aspiring musicians who have taken Pep Band 2 and who are interested in pursuing music at a professional or collegiate level once they've graduated from high school. Students will learn advanced music theory concepts as well as harmonic ear training, improvisation, comping, and jazz composition all while learning the jazz standard repertoire that has become a staple for any professional or aspiring professional musicians.

- **Open to:** Grade 12 with teacher approval
- **Prerequisite Course(s):** Pep Band 1 and Pep Band 2
- **Suggested Course(s):** None

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, combing 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 & may enroll again if previously taken with teacher approval
- **Prerequisite Course(s):** None
- **Suggested 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, combing 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 & may enroll again if previously taken with teacher approval
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None

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
- **Suggested Course(s):** None

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. Students will be required to purchase supplies for this course from the school costing approximately $60.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested 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. Students will be required to purchase supplies for this course from the school costing approximately $60.

- **Open to:** Grades 11-12 with teacher approval
- **Prerequisite Course(s):** Cosmetology 1
- **Suggested Course(s):** None

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. Students will be required to purchase supplies for this course from the school costing approximately $25.

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

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
- **Suggested Course(s):** None

Physical Education - 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
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Nutrition & Health
- **Course Video:** https://youtu.be/IfVBnBeweig

Physical Education - 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
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/hD_j8ZIMndA

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. Students will be required to purchase supplies for this course from the school costing approximately $20.

- **Open to:** Grades 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/OTUeg2eOX8w

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
- **Suggested Course(s):** None
- **Course Video:** https://youtu.be/OTUeg2eOX8w

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
- **Suggested Course(s):** None

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 10-12
- **Prerequisite Course(s):** None
- **Suggested Course(s):** Creative Writing and Communications
- **Course Video:** https://youtu.be/3vxdR8wI7Wk

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 11-12 with teacher approval
- **Prerequisite Course(s):** Video Production 1
- **Suggested Course(s):** Creative Writing and Communications
- **Course Video:** https://youtu.be/3vxdR8wI7Wk

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 12 with teacher approval
- **Prerequisite Course(s):** Video Production 1 and Video Production 2
- **Suggested Course(s):** Creative Writing and Communications