



High School Course Descriptions - 2021-22

Core Classes (students receive letter grades that are factored into their GPAs)

Applied Mathematical Modeling

This course is about students applying algebraic modeling and probability concepts to specific contexts. Algebraic contexts are varied and include choosing the best wireless plan, optimizing production at a skateboard factory, minimizing the cost of reducing pollutants, scheduling workers in a pizzeria, choosing the right mix of colleges to apply to, and finding the best location for a disaster response facility. Probability contexts include managing customer service phone lines, buying collision insurance, analyzing the pattern of space shuttle disasters, dealing with absenteeism, scheduling a health care clinic, and improving graduation rates, simulating probabilistic situations with random number generators to develop intuition as to the nature of randomness. Throughout the year, students will be making sense of problems, persevering in their solution, mathematically modeling real-world contexts, using appropriate tools when necessary, and attending to the precision of results.

(FY, 1 Math credit)

Algebra II

Algebra II is an extension and deepening of topics studied in Algebra I and Geometry. It uses open, creative, and visual math tasks, problem-based inquiry, and real-life scenarios to ask students to think deeply and conceptually about mathematics. Specific topics include sequences and functions, polynomials and rational functions, complex numbers and rational exponents, exponential functions and equations, transformations of functions, trigonometric functions, and statistical inferences. The curriculum is designed using Mindset Mathematics and Illustrative Mathematics.

(FY, 1 Math credit)

Spanish

Students will work on refining their listening comprehension, speaking, reading, and writing skills through in-depth studies of authentic sources (including, but not limited to: music, performances, books, movies, and guest speakers). By the end of two years of High School Spanish, students will have gained an extensive vocabulary, a strong understanding of Spanish grammar, and a deepened cultural appreciation for the people in various Spanish-speaking countries. Students will be assessed through a variety of projects, quizzes, presentations, and written submissions.

(FY, 1 Language credit)



Political Science

Political Science is an introduction to American politics and government at the national level. It is designed to introduce you to the nature of political behavior, American political institutions, and the broader political system. This course is also designed to encourage you to consider the responsibilities of citizenship, to construct a working definition of active citizenship, and to think of ways in which you can be involved at the local, state and national political level. Political Science will also use case studies of recent American political history and current events to provide context for our study of government institutions, the current structure and direction of American politics, and how decisions are made at the national level. We will also consider additional actors on the American political stage including the influence and role of the media, what the advent of social media has meant to governing and campaigning, the role of American public opinion, the role and influence of grassroots political movements, and the way in which specific issues have galvanized large numbers of American voters. This course may be taken as dual credit through MSU. (FY, 1

Social Studies credit)

Physics

Physics is the branch of science concerned with interactions between matter and energy. This class is a general physics course, covering a broad range of topics including Newtonian, Relativistic, and quantum physics. Newtonian physics is the largest area of study in this course, covering topics such as the laws of motion, velocity, acceleration, projectile motion, optics, waves, forces, and energy. Relativistic physics gets into the effects of speed and gravitation on time, as well as Einstein's contributions to our modern understanding of the universe. While relativistic physics delves into the largest systems within the universe, including the universe itself, quantum physics deals with the smallest systems to be found; those within the atom itself. Upon completion of this course students will have an understanding of how this branch of science has changed over time, important figures and their contributions, and a working knowledge of how to investigate, measure, and calculate various aspects of several phenomena. (FY, 1

Science credit)

English I-IV: In this course, students will engage in a variety of experiences to develop skills in reading a variety of texts, composition, revision, writer's workshop, collaborative learning and presentation, and building vocabulary and grammar skills. Special emphasis will be placed on developing the student's ability to think critically about a variety of issues presented in fiction, non-fiction, and other forms of media. Students will engage in regular academic discussion, collaboration, composition etc., which will help to develop an understanding of self, others, and the world. At home reading, both assigned and extracurricular, will be crucial to students' success in this course. (FY, 1 English credit)



High School Electives: Students will earn a Pass/Fail for the following courses, unless otherwise noted

MS/HS Drama: Theatre

Students will engage with multiple aspects of theatre and how they relate to the modern world. They will examine the history of theatre as well as how it has developed in different cultures and in different moments in history. An examination of theatre practices such as Ancient Greek theatre, Kabuki, Commedia Dell'arte, Shakespeare, and many more will be discussed.

- ❖ Students will have the opportunity to learn about theatre vocabulary, culture and will discuss the variety of careers and education required to work in the field of theatre. These may include but are not limited to: Make-Up, Costuming, Set Design, Stage Management, Theatre Management, Artistic Direction, Producing, Directing, Stage Tech, etc.
- ❖ In order to utilize theatre to improve relative skills that can be put into practice immediately, students will also participate in monologue study and scene work, reader's theatre, and techniques of public speaking that they will be able to apply to their current studies to improve presentation skills and become more comfortable with leading discussions, engaging with an audience, and voice work to become more effective.
- ❖ *Required Materials: Students will be asked to provide costume, make-up, props, etc. for their scene studies/monologues. These will be the responsibility of the student to provide. If the student selects a monologue/scene study that cannot be obtained without purchase, this purchase will also be the responsibility of the student.*

(1st and/or 2nd semester, 0.5 Fine Art credit)

PE: MS/HS Yoga

Students will participate in yoga classes designed to build strength, flexibility, balance, and most importantly, mindfulness. Students will experience intentional movement complemented by breath practice and meditation. A yoga mat, water bottle, and athletic clothing are required for this class. Classes will be led by a certified yoga instructor.

(1st and/or 2nd semester, 0.5 physical education credit)

PE: Archery

Students will follow the NASP (National Archery in the Schools Program) guidelines to practice the sport of archery. Students will meet twice a week to learn the correct technique and etiquette needed to be a successful archer and to develop an appreciation and understanding for the sport. Students will learn the correct terminology and fundamentals to shoot a Genesis Original Bow using Eastern Arrows. All equipment will be provided by the school.

(2nd semester, 0.5 Physical Education Credit)



Counterfactual History

A project and inquiry-based course exploring *what might have happened* across time and space. Students will utilize skills as historians to learn what happened during specific periods, and then they will consider what moments might have gone differently to provide different outcomes.

(1st semester, 0.5 elective credit)

World Religions (8th and HS)

This project and inquiry-based class will explore major world religions through the course of the semester, supporting students' understanding of philosophy, history, and culture. Students will be tasked with reading primary sources, completing research, contributing to class discussion, and writing about their topics of choice.

(2nd semester, 0.5 elective credit)

STEM

In this STEM elective students will learn about the engineering design process while first going through a guided engineering project. Upon completion of this guided project, students will work as teams to find an engineering solution to a problem of their choosing. Teams will work together, utilizing the strengths of their members to accomplish their goal. Students will be expected to reach out to experts in the community when seeking solutions and answers. Teams will be designing, building, testing, and refining their projects. This class is ideal for anyone interested in learning how to make the world a better place, even if you simply want to make a better wood-fired pizza oven. The sky's the limit in this class, and artists, wordsmiths, and philosophers are as needed and welcome in STEM Class as those seeking a future in engineering.

(1st and/or 2nd semester, 0.5 elective credit/semester)

Digital Arts I or II

In a world filled with technology, the realm of digital arts is ever-growing. In this class, students will get the opportunity to foster an awareness and understanding of new media and how it relates to our society. Students will explore the principles of design and elements of art through the modern lens of digital arts.

(1st semester, 0.5 Fine Art credit)



All Stars

Membership to The Summit All-Stars is determined by invitation or audition. The objectives of the Summit All-Stars include:

- Actively representing The Summit via public music performance as the premier first-call ensemble, providing multiple performance opportunities for our student musicians
- Preparing musical content quickly and accurately to further develop stage presence and showmanship at an advanced level
- Equipping student musicians with skills necessary to organize and execute their own lifelong music making via practical experience
- Providing student musicians with opportunities to gain experience tutoring, teaching, and mentoring peers and younger musicians *(FY, 1 Fine Art Credit)*

Culinary Arts

Students in this course will practice skills of cooking and baking, will advance their learning of kitchen etiquette, and will learn strong communication and organizational skills. Students will at times be asked to contribute ingredients and supplies for recipes and to prepare recipes in presentations for the class. *(2nd semester, 0.5 Practical Art credit)*