

JEAN & JERRY FRIEDMAN

Shalhevet
שלהבת High School



Upperclassman Course Selection Catalog
2020 – 2021

Welcome!

This course catalog includes the courses Shalhevet will be offering to juniors and seniors during the 2020 – 2021 academic year. We encourage students to think through their choices carefully and take academic interests, appropriate rigor, work/life balance and graduation requirements into consideration. We've put together this guide to supplement rather than replace individual conversations and guidance. Your teachers, principals and college counselors are here to help you think through these choices and offer advice.

As upperclassmen, you exercise far more control over your schedules. This control allows you to select from electives, advanced courses, and other unique learning experiences that distinguish you academically. Given this responsibility, it's essential that you make informed decisions, so you're able to excel in the classroom, participate in co-curricular activities, and take on challenges that don't come at the expense of your mental and physical health – which is why free periods can be valuable! Our goal is to allow you to challenge yourself while still giving you room to succeed.

Please keep in mind that your course selections are not a *fait accompli*; you'll have the opportunity to revisit your decisions, and switch courses if necessary. Please keep in mind that **instructor approval is required for all advanced level courses** and that space constraints and scheduling conflicts may prevent you from enrolling in *all* of your top choices; if and when conflicts arise, we will let you know.

We would like to emphasize the individualized nature of this process and reinforce that course selection will be different for every student, taking into account your strengths, outside commitments, future plans, and interests. Students may take up to nine courses and are advised to take at least seven. Below are the graduation requirements for the Classes of 2020 and 2021:

Judaic Studies

<i>Tanach</i>	4 years
<i>Talmud</i>	4 years
Jewish History	3 years
Jewish Philosophy	1 year
Hebrew	3 years

General Studies

English	4 years
Fine Arts	2 years (including 9 th grade arts rotation, and Art Composition & Design)
Math	4 years or through Precalculus (4 years recommended)
*Science	3 years (including Biology, Chemistry)
*Social Science	3 years (including World History, US History, and choice of Gov/Econ, SAS Econ or SAS Civics)

***students are required to take at least four years of either Science or Social Science*

Below is a brief overview of the courses available in each subject area divided by grade level. There are worksheets on the last two pages of the catalog (one for rising juniors and one for rising seniors) to help you plan out your selections. An online Course Selection Form will be given out to all rising juniors and seniors during their academic advising appointment and **will be due by Friday, March 27th**.

SUBJECT	9 th grade	10 th grade	11 th grade	12 th grade
ENGLISH	English Composition	American Literature	Interrogating Evil in Brit Lit Banned Books	Creative Writing Film, Lit. & Comp.(H) Jewish Lit. (SAS) Screenwriting
SOCIAL STUDIES	World History	US History US History (H)	Adv. Econ (SAS) Adv. Psych (SAS) Civil War (SAS) Eurasia (SAS) Law, Relig. & Society Positive Psychology US Gov't & Econ	Adv. Econ (SAS) Adv. Psych (SAS) Civics (SAS) Eurasia (SAS) Law, Relig. & Society Positive Psychology US Hist Research Seminar (SAS) US Gov't & Econ
MATHEMATICS	Algebra 1 Geometry (H)	Geometry Algebra 2/Trig (Adv) Algebra 2/Trig (H)	Algebra 2 Algebra 2/Trig Precalculus (Adv) Precalculus (H) SAS Statistics	Functions, Stat/Trig Precalculus SAS Statistics AP Calculus AB AP Calculus BC
SCIENCE	Biology	Chemistry	Advanced Bio (SAS) Adv. Physics (SAS) Biochemistry (SAS) Comp. Science (SAS) Environmental Sci Physics	Advanced Bio (SAS) Adv. Physics (SAS) Biochemistry (SAS) Comp. Science (SAS) Environmental Sci Physics
FINE ARTS	Music Appreciation	Art Comp. & Design	SAS Studio Art SAS Music Theory	SAS Studio Art SAS Music Theory
HEBREW	Hebrew language	Hebrew Language	Hebrew Language	Israeli Cult. & Convo. Heb. Film & Lit. (SAS)
JUDAIC STUDIES	Tanach 1 Talmud 1 Jewish History	Tanach 2 Talmud 2 Mod. Jewish History	Tanach 3 Talmud 3 Beit Midrash Track Israel Ed Israel Ed (SAS)	Tanach 4 Talmud 4 Beit Midrash Track Jewish Philosophy Halacha Elective

(SAS) denotes a Shalhevet Advances Studies course; (H) denotes Honors option available.

Shalhevet Advanced Studies (SAS) and Advanced Placement (AP)

Shalhevet's independently-designed, advanced courses focus on critical thinking, conceptual understanding, and student engagement with the material. These innovative courses allow Shalhevet to offer a more diverse and interdisciplinary portfolio of rigorous courses, while allowing students and teachers to explore subject matter in great depth. **Both SAS and AP courses are seen as the most rigorous courses available.** If you have more questions about these courses, please be in touch with the College Counseling department.

ENGLISH DEPARTMENT

Graduation Requirement: 4 years

Course Offerings for Juniors:

Banned Books

Metaphors and Monsters: Interrogating Evil in British Literature

Course Offerings for Seniors:

Film, Literature & Composition (honors option available)

Jewish Literature (SAS)

Language and Literature (12th grade Creative Writing)

Screenwriting and Literature

Course Descriptions:

Banned Books

Banned Books is an English class open to juniors. In this course, students will read and engage critically with some of the books that have been deemed a threat to society. Literary analysis and the development of written and oral critical skills are the primary goals of the course.

Many of the books selected revolve around particular types of revolt or rebellion. Throughout the course, students will identify the “objectionable” elements in the texts, analyze why certain texts were considered threatening, reflect on how the texts add to our understanding of literature and social movements, and consider the place of censorship in our society.

This course requires students to read the texts independently and then come to class prepared to engage in the discussion in a productive manner. Students will be expected to develop their own interpretations and arguments about the literature and their own opinion about their potential for negatively influencing a reader. Possible texts include: Fahrenheit 451, The Handmaid’s Tale, 1984, Huck Finn, Frankenstein, Alice in Wonderland, Of Mice and Men, Native Son. *No pre-requisite required.*

Metaphors and Monsters: Interrogating Evil in British Literature

First and foremost, this course teaches you to think critically about literature and art. You will read a selection of literature that asks questions about what leads human beings to become evil, enabling us to think about the temptations in our own lives that often lead us to make poor choices. We begin in the 17th century with William Shakespeare’s *Macbeth* and end in the twentieth-century with Ian McEwan’s *Atonement*. We will be studying the history behind each of the novels, plays, short stories and poems we read along with the authors’ personal connections to their writing as a means of better appreciating and understanding the literature. Students will learn how to think for themselves, read closely, present orally, write strong argumentative essays and love literature. *No pre-requisite required.*

Film, Literature & Composition (honors option available)

Film, Literature, and Composition is an English course open to seniors who wish to gain exposure to the history and aesthetic of film as an artistic medium. It is a writing-intensive, academic class designed to develop the critical thinking, writing, and viewing skills necessary for gaining a deeper understanding of the role of film in society. We will focus primarily on how to watch and write about film, and students will learn how to incorporate film criticism and/or theory into their original analyses. Students will also be asked to create two short films

that showcase their understanding of specific film movements throughout history. This course will utilize several different approaches to cinematic analysis, covering films from a visual, theoretical, socio-historical, generic, and thematic perspective. Students will begin by developing a working vocabulary of the visual and technical aspects of film, focusing on lighting, camera angle and movement, shot selection, editing, framing and sound. We will examine the basic thematic and stylistic elements of various cinematic movements, such as silent film in Hollywood, German Expressionism, Italian Neorealism, and the French New Wave. Students will also study genres such as Gangster Film and Film Noir. We will also examine three novels and their cinematic adaptations to further explore how filmmakers translate written narrative into visual storytelling. *Pre-requisite for honors: Minimum of B+ in both semesters of previous year's English course and teacher recommendation. Exceptions may be made for qualified students.*

Jewish Literature (SAS)

This class will explore the complex development of Jewish identity through the analysis of novels, plays, short stories, poems and graphic novels written by influential European, American and Israeli authors from the 19th to the 21st century. We will read both classic and contemporary American literature as well as selected Israeli and Yiddish authors (in English) whose writings reflect on the development of individual and communal Jewish identity through the centuries. The goal of this class is to engage in an in-depth study of Jewish literature, while considering how it might shape or influence one's own sense of American Jewish identity and affiliation.

The class will ask questions about what makes a work of literature Jewish. What does it mean to live as a Jew in America today? What does literature have to say about being Jewish? How have writers and poets characterized the American Jewish experience? And how have Jewish writers – from novelists to Hollywood screenwriters – made an impact on America by sharing Jewish tradition and culture with the rest of the country? What connection does American Judaism and Jewish literature have with its Yiddish predecessors and Israeli counterparts? In this regard, through close reading and writing we will try to “bridge” our two worlds – the Jewish and the American – with the goal of gaining a better understanding of the life we live as Jews in America today. *Pre-requisite: Minimum of B+ in both semesters of 11th grade English course and teacher recommendation. Exceptions may be made for qualified students and a writing sample may be required.*

Language and Literature (12th Grade Creative Writing)

This class will explore Literature through the use of creative writing. We will practice a variety of writing styles, focusing on short story, poetry and screenwriting techniques with an emphasis on editing and rewriting. We will read short stories, novels, fairy tales and memoirs that take us from New York to Dresden and from India to England. This class will be structured in the way of the reading and writing workshop. Most classes will begin with an exercise in your writer's Portfolio, a writing critique by your peers and a discussion of the reading. There will also be a quiz approximately once a week to assess reading comprehension and participation. The writing portfolio will be due every few weeks and, at the end of each semester, you will be responsible for a large project that will reflect your understanding of the work done previously in class. *No formal pre-requisite required; students may be asked to submit writing samples.*

Screenwriting

Shalhevet Screenwriting is an English class that focuses on understanding the art and mechanics of screenwriting and applying that understanding to the writing of short films and feature-length screenplays. The first semester of the course focuses on the fundamentals of screenwriting: why we tell stories, creating a world, the role of concept, character, context, and theme, screenplay structure and formatting, and the art of offering and receiving feedback. The second semester focuses on writing through a multi-step process that involves vetting ideas in our “writers room” classroom community, consulting models, outlining, writing, rewriting, and rewriting again...and again. This class is for students who love movies and want to gain a deeper understanding of how film and television work, who are interested in exploring a different mode of creative writing, who are interested in acquiring an additional lens through which to view the world in general and storytelling in particular, and/or who may be interested in pursuing screenwriting or film production in college or professionally. *No formal pre-requisite required; students may be asked to submit writing samples.*

SOCIAL STUDIES DEPARTMENT

Graduation Requirement: 3 years, including 1 year each of World History, US History and choice of US Government & Economics, SAS Civics or SAS Economics; students are also required to take a 4th year in either the Social Studies or Science Departments; 4 years recommended.

Course Offerings for Juniors

- Advanced Psychology (SAS)
- Civil War & Reconstruction (SAS)
- Eurasia (SAS)
- Law, Religion and the American Jewish Community
- Positive Psychology
- US Government & Economics

Course Offerings for Seniors:

- Advanced Economics (SAS)
- Advanced Psychology (SAS)
- Civics (SAS)
- Eurasia (SAS)
- Law, Religion and the American Jewish Community
- Positive Psychology
- US History Research Seminar (SAS)
- US Government & Economics

Course Descriptions:

Advanced Economics (SAS)

Individuals and societies have explored and confronted the questions of how to assess value for centuries. Robert Kennedy famously said that our GDP (gross domestic product), “measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile.” Using theory, current articles from the news and case studies, we will explore not only the history of economics, but how we assess worth and value in the modern world. Course topics will include issues of supply and demand, elasticity, the ideas of both public and common good, free trade (both from an economic and political point of view), the evolution tax systems as well as basic personal financial management. *Pre-requisite: Minimum of B+ in both semesters of previous year’s Social Studies and Math courses as well as instructor approval. Exceptions may be made for qualified students.*

Advanced Psychology (SAS)

For all recorded history (and likely before) we have speculated about the things that contribute to how we think and behave. From its beginnings in the 19th century, psychology has also tried to answer these questions, but from a scientific perspective. As David Myers, author of our textbook, observes, psychologists require curiosity, skepticism, and humility combined with the ability to think critically: examining assumptions, perceiving hidden values, and evaluating evidence. SAS Psychology will introduce you to the multiple perspectives psychology has adopted, to the broad field of knowledge that its research has produced, and to the kind of critical analysis that made it possible as psychologists attempt to answer the basic questions of

mind and behavior. *Pre-requisite: Minimum of B+ in both semesters of previous year's Social Studies and English courses as well as Biology. Exceptions may be made for qualified students.*

Civics (SAS)

SAS Civics is a new course being offered at Shalhevet for 12th graders. Civics is the study of the rights and responsibilities of citizenship. In this course, we will break down both elements (rights & responsibilities) through specific activities aimed at solving much needed problems in America. The "Advanced Study" element comes into play with a significant reading load as well as additional media analysis from specifically chosen podcasts, videos, and various other platforms. We will study ideas that range from ancient philosophers to modern-day college professors to highlight the overlapping themes of how to view your place within a society. This is a class focused on being an active, contributing member of society where you accept the burden of improving the nation. *Prerequisite: A in US History, A- or better in a Junior-year SAS history course, OR instructor approval.*

Civil War & Reconstruction (SAS)

This course will examine the watershed event in American history: the Civil War and Reconstruction Era, 1860-1877. During this period, the questions left unanswered by the founding generation came to a head, and countrymen from the northern and southern United States fought against one another, died in great profusion, and ultimately pieced together a new nation from the fragments of war. Four years of bloody fighting and twelve years of continued political and social discord would determine what kind of a nation the United States would be. In this course, we will look closely at the sectional strife that led to southern secession and armed conflict; we will follow the military narrative while simultaneously focusing on the political, social, and economic issues of two democratic republics at war. We will survey the political landscape of the Reconstruction period in the north and south as well as emphasize the experience of former slaves, underscoring the meaning of freedom. In the end we will consider not only what the Civil War and Reconstruction did accomplish, but also what they did not. *Pre-requisite: Minimum of A- in US History or instructor approval.*

Eurasia Connected (SAS)

Eurasia covers a vast expanse of the world and includes wildly divergent nations, cultures, and histories. Modernity sees these nations become increasingly interconnected. This course will examine ten countries, extending from Western Europe to the Far East from 1400 to the present. We will examine how the modern development of these countries shaped them and their relationships with their neighbors, and how they inform current events today. In addition, we will approach history not only from a factual perspective, but from a conceptual perspective, delving into how history is reflected in cultural expressions emerging from these countries. This course will additionally develop research and writing skills necessary for writing a college-level research paper with a stronger emphasis on writing than on examinations. *Pre-requisite: Minimum of B+ in both semesters of previous year's Social Studies and English and instructor approval.*

Law, Religion and the American Jewish Community

In an age of ever-growing religious diversity, the United States is confronting a host of complex questions regarding conflicts between law and religion. The primary goal of this course is to evaluate how the American Jewish community should approach the role and of religion in both the U.S. and Jewish legal systems. Beginning with the role of religion in the U.S. legal system, the course requires students to evaluate and develop a uniquely Jewish approach to the

proper constitutional role of religion in the United States. Turning then to the Jewish legal system, the course requires students to similarly evaluate and interrogate the Jewish law approach to the *halachic* system of *beis din* (rabbinical court) adjudication. By considering the two alongside each other, students can compare the respective roles of religion within parallel legal systems. In turn, students will better be able to consider how their own Jewish faith informs law in the 21st century. *Pre-requisite: Minimum of A- in both semesters of previous year's Social Studies and English and instructor approval.*

Positive Psychology

This semester course is based on the ground-breaking Harvard University course by the same name, taught by Dr. Tal Ben-Shahar, currently of the Maytiv Center in Israel. Students in this course will gain an understanding of the academic field of positive psychology, which is the study of optimal human functioning. While the field of psychology has traditionally focused on fixing what is wrong by understanding the roots of human suffering, positive psychology concentrates on building what is right in people by scientifically studying strengths and values. This rapidly growing field represents the scientific study of what makes us happy, healthy, and content in our lives. Students will explore current research into the dimensions of happiness and subjective well-being, and acquire skills to implement positive-psychology-based concepts in one's life. Assignments include readings, written reflections, quizzes, projects and research. Topics include happiness, self-esteem, empathy, friendship, love, achievement, creativity, music, spirituality, and humor.

United States History Independent Research Seminar (SAS)

This course is open to Seniors only. Students will research any topic of their choosing in United States history. Once the topic is approved by the instructor, students will proceed to research the topic independently. The objective will be for students to understand history and historiography, and to challenge students to think critically about the history of the United States in ways that they might have never considered. The class (limited to five students) will meet as a group and with the instructor individually at specified intervals over the course of the semester. There are no regular class meetings.

Presence and engagement with the discipline are essential components of this course, which will culminate with the completion of an advanced college-level research paper turned in during the second semester. *Prerequisite: A- or better in a Junior-year SAS history course (Civil War or Eurasia) AND instructor approval.*

US Government & Economics

"The economy, stupid!" was a slogan coined in 1992 as a way to push for political change and predict the successful campaign for Bill Clinton. The American system of government is very closely related to the American economy and this course blends them together and teaches both aspects simultaneously. Offered to the upperclassmen of Shalhevet, this class will cover the structure of our political and economic systems while focusing on a particular area of interest (an American issue) for each individual student in the class. Starting with a close examination of the foundational components of the American political system, students will study how this system has evolved over the last roughly 250 years. We will investigate historically relevant (and controversial) Supreme Court cases, the balance between government intervention and individual freedom, and how extreme partisanship has influenced the functionality of the government today all while keeping an overarching theme

of the role economics plays in the system. This course aims to create a safe yet challenging environment in which students can explore/defend their personal views, but also demands that they understand and listen to opposing opinion. This issue will be a continuous theme throughout the year for each unit of study. During the second semester, the focus will shift to focus on economic principles and how government interaction plays a major role in various systems, businesses, and ideas. *No pre-requisite required.*

SCIENCE DEPARTMENT

Graduation Requirement: 3 years, including 1 year each of Chemistry, Biology and additional science course of the student's choice; students are also required to take a 4th year course in either the Science or Social Studies Department; 4 years recommended.

Course Offerings for Juniors and Seniors:

Advanced Biology (SAS)

Advanced Physics (SAS)

Biochemistry (SAS)

Computer Science (SAS)

Environmental Science

Physics

Course Descriptions:

Advanced Biology (SAS)

Advanced Biology (AB) is a course designed for students that have successfully completed the general Biology and Chemistry courses. Specifically, AB seeks to enroll highly motivated students that are truly fascinated by biology and are interested in pursuing a Science major in college. This is particularly important since this is a rigorous course that will demand significant effort and dedication from the students. AB will loosely follow the major focal themes of the Advanced Placement Biology curriculum, focusing heavily on concepts related to evolution, molecular and cell biology, and with a strong emphasis on biotechnology techniques and applications. The AB curriculum should deepen the understanding of basic concepts already covered in general Biology, and further expand on them through readings and discussions of related primary literature. Indeed, a major goal for the class is to increase scientific literacy, which will be accomplished by students learning to read scientific primary literature, writing laboratory reports, and delivering oral presentations to the class. The course also covers neurobiology, and students will be reading scientific research articles that apply biotechnology techniques to understand how an aspect of the brain works. Other topics that will be discussed include: gene therapy, genetic engineering and genetically modified organisms (GMOs), cancer, the use of stem cells in disease, and biotechnology techniques such as gel electrophoresis and bacterial transformation. Students will be expected to complete a generous amount of reading at home, as the most important concepts will be discussed through lectures and further unpacked through class discussions, inquiry-based laboratory activities, and round-table discussions on relevant articles. Students will demonstrate understanding and mastery of the material through quizzes, tests, participation, lab reports, and both oral and written reports. *Pre-requisite: Minimum of B+ in both semesters of Biology and instructor approval. Exceptions may be made for qualified students.*

Advanced Physics (SAS)

This course is designed for students with a strong foundation in mathematics and the physical sciences. Specifically, SAS Physics seeks to enroll highly motivated students that are truly fascinated by physical aspect of phenomena in the world around them, and are interested in pursuing a science or engineering major in college. This is particularly important since this is a rigorous course that will demand significant effort and dedication from the students. The format will include lecture, discussion, problem-solving, and laboratory work. Quantitative skills learned in second year algebra/trigonometry and chemistry will be employed in the

problem solving concepts covered. An emphasis is placed on a mathematical understanding of the physics principles that are presented. There are projects which demonstrate students' mastery of course materials. Class activities in this course are focusing on the natural laws that govern physical phenomenon throughout the universe. General areas of study will include concepts of Newtonian mechanics, motion, energy, astronomy, light, magnetism, and electricity. Student evaluation will be based on homework, periodic quizzes, tests at the end of each chapter, and a comprehensive final exam. *Pre-requisite: Concurrent enrollment AP Calc or concurrent enrollment in PreCalc Honors and completion of summer work.*

Biochemistry (SAS)

This Biochemistry class explores chemical processes that occur within living organisms. Students will be asked to use their foundational chemistry knowledge to delve deeper into the mysteries of the inner workings of the living organisms. The course starts with proteins, the moderators of nearly all in vivo chemical reactions, proceeding then into the science of proteomics. Students then continue to explore the nucleic acids, as they take closer look at DNA and RNA, as well as modern DNA technologies, including methods of genetic engineering. Unit 3 emphasizes membranes, bio signaling, and showcases neuroscience through specific case studies projects. The students will finish the year by tying it all together with nanomedicine and a conversation about pharmaceutical development. *Pre-requisite: Instructor approval.*

Computer Science (SAS)

This course will focus on developing and exercising Computational Thinking skills. We will learn how to break down complex requirements into small, discrete, computational steps. Subsequently, we will be implementing the concepts in code using Python as our implementation language. Upon completing the course successfully, you will have acquired the basics of computational thinking and coding in Python whereupon you will be able to apply the approach and the coding skills to new situations and with new languages.

Our primary text is written in a conversational tone. It is filled with annotations, graphics, exercises (with solutions), repetition and characters that will accompany us through the school year. The text is designed to be written in and the exercises completed in place. We will be writing code that will communicate with the user through text and later in the year, through graphics. We will be leveraging Web Services to identify the location of the International Space Station and implementing Conway's Game of Life.

The prerequisites for the course are simple. You should know your way around your computer and know how to manage files and folders, how to install applications and use a word processor. You should be unafraid and excited to try something different and learn how to solve problems in a new way. You should be prepared to fail at a task and not expect to complete it successfully the first time on every occasion, pick yourself up and dust yourself off, and try again with an altered approach. This builds resiliency. If you have grit or are willing to develop grit, then this class is for you.

Our class meets once a week on campus on Fridays. There will be a remote, live, online session one night during the week each week where additional help, review and enrichment is available. While time in class may be limited, it is important to budget three to four hours a week outside of class preparation and for coding class assignments, exercises and projects.

*It will be necessary for you to have a computer for the class. Windows PCs and Apple Macs are both acceptable. **Chromebooks, iPads and other tablets are not satisfactory for this class.** You will have access to a number of tools throughout the class which include the online supporting materials for the text, Codingbat.com, GoToMeeting, PyCharm and others.*

Environmental Science

Environmental Science introduces students to fundamental topics in earth and environmental science, and emphasizes their connection to everyday life. The goal is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Additional topics include: earth's history and geology, global climates, biodiversity and ecosystem services, human history, modern environmental impacts, global climate change, and alternative energy.

Students complete labs that prompt them to explore their local Los Angeles environment or dig into favorite topics in greater depth. Lab work helps students build scientific research and communication skills through mapping, graphing, analyzing data, researching the scientific literature, and presenting findings in class.

Physics

Physics is a lab-science class that explores the motion of objects and the causes of motion. Students learn scientific reasoning and problem solving skills by applying mathematical models to the behavior of matter and energy. Topics include Newton's Laws, conservation of energy and momentum, the physics of fluids, vibration and sound, modern Physics, and the structure of matter. *Pre-requisite: Two years of science, and concurrent enrollment in Precalculus.*

MATHEMATICS DEPARTMENT

Graduation Requirement: At least 3 years, and through Precalculus; 4 years recommended. *Mathematics Department course placement is determined by teacher recommendation and approval by the Math Department.*

Course Offerings for Juniors and Seniors:

- Algebra 2 (honors determined by department)
- Pre-calculus (honors determined by department)
- SAS Statistics
- AP Calculus AB
- AP Calculus BC

Course Descriptions:

Algebra 2/Trig

This course emphasizes further development of algebraic skills and focuses on various functions, their properties, graphs and transformations. Students explore polynomial, rational, exponential, and logarithmic functions, inverse functions and the composition of functions. Students solve linear, quadratic, exponential, logarithmic, and rational equations, learn about the complex number system and solve problems involving direct and inverse variation. At the end of the course, students receive an introduction to trigonometry, including unit circle trigonometry.

Algebra 2/Trig Advanced

This course emphasizes further development of algebraic skills and focuses on various functions, their properties, graphs and transformations. Students explore polynomial, rational, exponential, and logarithmic functions, inverse functions and the composition of functions. Students solve linear, quadratic, exponential, logarithmic, and rational equations, learn about the complex number system and solve problems involving direct and inverse variation. Students are also introduced to arithmetic and geometric sequences. At the end of the course, students receive substantial introduction to trigonometry, including unit circle trigonometry and working algebraically with trigonometric identities. The TI-84 calculator is an integral part of this course.

Algebra 2/Trig Honors

Algebra 2/Trig Honors is the continuation of the material that students have learned in Algebra 1. The beginning of this course is the review of Algebra 1 topics extensively and in more depth than had been taught in previous years. Then this course introduces students to all different types of function, their graphs, their pattern and their applications. These functions consist of linear, piece-wise, parametric, polynomials, logarithmic, rational, and many others. To grasp the Algebra 2 concept better, students learn how to use the graphing calculators in order to visualize, to compare, and to analyze the behavior of various two-dimensional graphs. At the end of the course, students receive substantial introduction to trigonometry, including unit circle trigonometry and working algebraically with trigonometric identities. The TI-84 calculator is an integral part of this course.

Advanced Pre-Calculus

This course is taught with an eye toward preparing students to take AP Calculus AB the following school year. As such, students spend extensive time studying algebraic and

transcendental functions from algebraic, numerical, graphical and verbal perspectives. Graphs and their transformations receive extensive coverage. Systems of equations and an introduction to sequences and series are also covered. Extensive use of a College Board-approved graphing calculator is required inside and outside of class. Students are introduced to making arguments using mathematical facts, as a way of readying them for the AP Calculus AB the subsequent year.

Pre-Calculus

This course serves as a capstone to a student's study of high school mathematics. Polynomials and rational functions are reviewed extensively, including factoring and graphing techniques. Next students spend time with exponential and logarithms before turning their attention to extensive study of unit circle trigonometry. Systems of equations and an introduction to sequences and series are also covered. Time permitting, an introduction to the derivative is also included. Students who take this course prior to their senior year are eligible to take SAS Statistics the following year.

Pre-Calculus Honors

This course is required for the student who wishes to take AP Calculus BC the following school year. Polynomials and rational functions are studied in-depth from both a mechanical and theoretical standpoint. The concept of a limit is breached early on in the course. From there, students complete a rigorous treatment of exponential, logarithmic and trigonometric functions. Sequences, series, and analytic geometry receive substantial treatment as well. Students receive extensive exposure to parametric curves and polar coordinates. Finally, students begin the study of differential calculus in which they work with both polynomial and transcendental functions.

Functions, Statistics and Trigonometry

This course bridges the gap between Algebra 2 and college mathematics courses such as statistics and calculus. Students approach linear, polynomial, and exponential functions from a real-life perspective, learn the basics of trigonometry and are introduced to elementary statistics. Upon successful completion of this course, students should be ready for either a basic college level course in elementary statistics or calculus.

Advanced Placement Calculus AB

Students complete the College Board's AB Calculus rubric which is akin to most first semester courses in Calculus offered at the university level. Limits and continuity, derivatives—their techniques and applications—single variable integration, computation of areas as well as the volumes of solids of revolution are covered. Among the theorems stressed in the course are the Intermediate Value Theorem, Extreme Value Theorem, Squeeze Theorem, Rolle's Lemma, Mean Value Theorem, and The Fundamental Theorem of Calculus. Students in the course also spend about one month reviewing for the AP Exam.

Advanced Placement Calculus BC

Students complete the College Board's BC Calculus rubric, which covers roughly the same material as the first two semesters of college calculus. In addition to the material covered in AP Calculus AB (outlined above), the course covers the remaining basic concepts of single variable calculus: techniques of integration, integration in polar coordinates, infinite sequences

and series, basic calculus of vector functions and an introduction to differential equations. Students in the course also spend about two weeks reviewing for the AP Exam.

SAS Statistics

SAS Statistics covers much of the material taught in a traditional college introductory statistics class but from a perspective of developing the tools that help students become an informed citizen. Students will learn about the methodology behind medical trials, political surveys, marketing campaigns and crucial sports metrics. Students enrolled in this SAS course will build a portfolio that looks at the statistical methods learned using the lens of a topic and a series of related questions of their individual interest.

JUDAIC STUDIES DEPARTMENT

Graduation Requirement: 3 years of Jewish history; 1 year of Jewish Philosophy; 4 years of *Talmud* and *Tanakh*.

Juniors must choose a course in Israel Education.

Seniors may choose an elective course in Judaic Studies in lieu of Hebrew

Course Offerings for Juniors:

Israel Education: An Analysis of the History, Politics and Society
(required of all Juniors; SAS and on-level sections available)

Talmud Options: Beit Midrash Track or LaHaV

Tanakh: LaHaV

Course Offerings for Seniors:

Jewish Philosophy (required of all Seniors – Advanced and on-level sections available)

Talmud Options: Beit Midrash Track or LaHaV, with breakfast options for AGS and *Tanakh bekiut*

Tanakh: LaHaV

Judaic Studies Elective (Halacha)

Course Descriptions:

Israel Education: An Analysis of the History, Politics and Civic Society (SAS)

This course examines the competing perspectives behind the headlines. Students in this course will develop the breadth of knowledge, narratives, and skill set to engage in any issue related to Israeli history, politics and society. Over two semesters learners will investigate major regional developments of the modern era including the foundations of political Islam, the colonial legacy, modern Zionism, religious Zionism, Palestinian nationalism, the peace process, American foreign policy in the Middle East, Israel's relationship with the UN and American campus life. The critical aspect to this course is that students will be exposed to multiple perspectives and competing narratives among Israelis and between opposing sides of the Israeli-Palestinian conflict. To that end, students will study writers, thinkers and activists from across the political spectrum in order to nurture their own informed positions while recognizing that there are always other perspectives as well. The course is designed for students who are serious about gaining the knowledge and independence to form their own opinions and to formulate new ideas that can be supported by the facts and well-reasoned analysis. Students will be expected to keep up with the assigned readings and come to class prepared to actively participate in discussion and intelligent debate, with students taking increasing responsibility for their development as engaged and critical thinkers, readers, viewers, listeners and writers. *Pre-requisite: Minimum of B+ in both semesters of previous year's Jewish History course and a writing sample from a recent Judaic studies or social studies course.*

Beit Midrash Track

We're excited to continue offering a brand new Talmud option for Juniors and Seniors this year, called the Beit Midrash Track. This course will be a mixed 11th and 12th grade class, limited to a small cohort of students motivated to pursue an immersive, *beit midrash*-style learning experience that focuses on *chavruta* learning and independent skills. This course is designed for those students who want to devote more time to studying *gemara* and who feel that they've mastered the fundamentals of our LaHaV curriculum and are ready to step into a more "traditional" style of learning. While AGS students in 10th grade take 3 periods of

Talmud + 3 breakfasts a week, the Beit Midrash Track will meet every morning from 8-8:55am, as well as 5 breakfasts each week. In addition to the emphasis on gemara learning, students in this track will also study LaHaV's tanakh curriculum, and the key commitments for participation in this track are daily breakfasts along with one Flex period a week. A sample schedule is included below to illustrate the learning schedule in this program:

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00am-8:55am	Gemara	Gemara	Gemara	Gemara	Gemara
8:55am-9:15am	Gemara	Break	Gemara	Break	Gemara
9:15am-9:30am		LaHaV Tanakh		LaHaV Tanakh	
9:30am-9:45am	Break	LaHaV Tanakh	Break	LaHaV Tanakh	Break
9:50am-10:45am					
10:50-11:30 (Flex)		LaHaV Tanakh			

Please note that students who *do not* elect to join the Beit Midrash Track will continue to study the 11th and 12th grade LaHaV curricula following the standard 3-period per week course schedule, and that the Beit Midrash Track will be scored on a 5.0 GPA scale.

AGS and Tanakh Breakfast Shiurim

Additionally, a half credit AGS course will be offered during breakfast, which will meet for 3 breakfasts/week AGS (similar to 10th grade AGS), and scored on a 5.0 GPA scale, We will also be offering an optional Tanakh *bekiut* course which meets twice a week during breakfast. Please note however that these breakfast options will no longer be required for placement in advanced LaHaV Talmud or Tanakh courses, which will remain on a 4.0 GPA scale.

Judaic Elective - Halacha

The purpose of this course is for students to learn what to do and how to do it. While in many ways, the core learning experience is centered around the conceptual ideas offered in Tanakh and Talmud and the question of "why," there is also tremendous value in learning the bottom line: What am I supposed to do? How am I supposed to keep Shabbat, kashrut and the *chagim*? What about medical ethics and *halakhot bein adam l'chaveiro*? This class is for students who want to learn halakha in a meaningful and rigorous way while developing the skills to navigate a *Shulhan Arukh* and *Mishna Berura* so that you will be able to learn these sources independently.

HEBREW DEPARTMENTS

Graduation Requirement: 3 years of Hebrew language;

Juniors continue with their Hebrew language courses

Seniors may choose an elective course in the Hebrew Department.

Course Offerings for Juniors:

Hebrew Language (required of all Juniors; continued at student's level)

Course Offerings for Seniors:

Israeli Culture & Conversation Hebrew

Hebrew Film & Literature (SAS)

Course Descriptions:

Israeli Culture and Conversation Hebrew

In this class the students will be exposed to Israeli culture via conversations on modern, practical topics. As a class, we will focus on conversations you would be likely to have at the airport, grocery store or bank. Additionally, students will learn songs of past and present and will discuss current events in Israel and throughout the world by reading actual articles from Israeli news sources. *Open to all 12th grade students.*

Hebrew Film & Literature (SAS)

In this class students will be exposed to Israeli culture, literature, and language via the screen. Using the films as a tool, the students will be introduced to the Israeli multicultural society and its various components of identity (religion, nationality, homeland, community, etc.) and raise questions about our identity. Students will examine their own unique and personal identity alongside identity that is shared with the family, community, people and other circles of belonging.

The class covers Israel from the following perspectives: demography, politics, daily life, people, the IDF, and actual historical events. For each unit, a classic or new movie from the best selection of Israeli films will be shown. Students who elect the honors option will compose essays about topics regarding the film and will be exposed to Israeli literature by reading and analyzing additional material. *Prerequisite: Enrollment in Honors Hebrew Literature in 11th grade*

FINE ARTS DEPARTMENT

Graduation Requirement: 2 years, including Music Appreciation and Art Composition & Design.

Juniors may choose to take a two-year elective course that will continue through senior year.

Course Offering for Juniors and Seniors:

SAS Studio Art (two-year course; must enroll beginning in junior year of high school)

SAS Music Theory, Concepts & Musicianship

Course Description:

SAS Studio Art

Students will expand upon the fine art skills acquired in 9th and 10th grade through guided instruction, lessons in art history and self practice.

Students will identify and use the principles of design to discuss, analyze and write about visual aspects in the environment and in works of art, including their own. They will research and analyze the works of an artist and write about the artist's distinctive style and its contribution to the meaning of the work. Students will expand their artistic vocabulary by researching periods of art and studying their similarities and differences including the social impact artists have on society.

Throughout the two years students will expand their personal growth in the visual arts through the identification of specialized areas of interest. They will prepare a portfolio of original two and three dimensional works of art that reflects refined craftsmanship and visual skill. Students will apply what they learn in the visual arts across subject areas. They will learn about lifelong learning opportunities and careers in the visual arts. *Pre-Requisite: Teacher Approval.*

SAS Music Theory, Concepts & Musicianship

This course will explore music from the inside out and improve students' understanding, performance and composition skills, and overall musical awareness. In the first semester we'll focus on music reading and writing; sight-singing and interval recognition; and ensemble work; along with the theoretical underpinnings of chord structure, key relationships, modulations, transposition and the circle of fifths. Second semester we'll continue to develop skills while also branching out into content areas such as instruments and instrumentation; key works in music history; and music in Jewish history, text and law. Be ready to play, compose, create and perform! Prior musical experience is recommended, and rehearsal and practice will be a constant during the course.

Your capstone project will be an individual musical performance with annotated program, at least one newly composed piece and at least one piece performed in ensemble.

Course Planning Worksheet – Junior year

9 courses total: 3 Judaic; 3 General; 1 Hebrew; 2 Elective/free.

Juniors may take up to two SAS or AP courses.

Circle your choices:

Subject	First Choice	Second Choice
Talmud	Talmud 3 Beit Midrash Program	N/A
Tanach	Tanach 3	N/A
Jewish History	Israel Ed Israel Ed (SAS)	Israel Ed Israel Ed (SAS)
English	Interrogating Evil in Brit Lit Banned Books	N/A
Math	Math course (Continued as placed)	N/A
Science	Advanced Biology (SAS) Advanced Physics (SAS) Biochemistry (SAS) Computer Science (SAS) Environmental Science Physics No Science	Advanced Biology (SAS) Advanced Physics (SAS) Biochemistry (SAS) Computer Science (SAS) Environmental Science Physics No Science
Social Science	Advanced Psychology (SAS) Civil War & Reconstruction (SAS) Eurasia (SAS) Law, Religion & Society Positive Psychology US Gov't & Economics No Social Science	Advanced Psychology (SAS) Civil War & Reconstruction (SAS) Eurasia (SAS) Law, Religion & Society Positive Psychology US Gov't & Economics No Social Science
Hebrew	Hebrew language (continued as placed)	N/A
Elective(s)	SAS Studio Art (2 yr. course) SAS Music Theory Additional Science Additional Social Science Free Period	SAS Studio Art (2 yr. course) SAS Music Theory Additional Science Additional Social Science Free Period

Course Planning Worksheet – Senior year

9 courses total: 3 Judaic; 3 General; 1 Hebrew option; 2 Elective/free.

Courses from junior year cannot be repeated.

Seniors may take up to three SAS or AP courses.

Circle your choices:

Subject	First Choice	Second Choice
Jewish Philosophy	Jewish Philosophy Advanced Jewish Philosophy	N/A
Talmud	Talmud 4 Beit Midrash Program	N/A
Tanach	Tanach 4	N/A
English	Creative Writing Film, Lit. & Composition Film, Lit. & Comp.(H) Jewish Literature (SAS) Screenwriting	Creative Writing Film, Lit. & Composition Film, Lit. & Comp.(H) Jewish Literature (SAS) Screenwriting
Math (placed by dept.)	Functions, Stat and Trig Precalculus AP Calculus AB AP Calculus BC SAS Statistics No Math	N/A
Science	Advanced Biology (SAS) Advanced Physics (SAS) Biochemistry (SAS) Computer Science (SAS) Environmental Science Physics No Science	Advanced Biology (SAS) Advanced Physics (SAS) Biochemistry (SAS) Computer Science (SAS) Environmental Science Physics No Science
Social Science	Advanced Economics (SAS) Advanced Psychology (SAS) Civics (SAS) Eurasia (SAS) Law, Religion & Society Positive Psychology US Hist Research Seminar (SAS) US Gov't & Economics No Social Science	Advanced Economics (SAS) Advanced Psychology (SAS) Civics (SAS) Eurasia (SAS) Law, Religion & Society Positive Psychology US Hist Research Seminar (SAS) US Gov't & Economics No Social Science
Hebrew (placed by dept.)	Israeli Culture & Conversation Hebrew Film & Literature (SAS) Judaic Elective - Halacha	Israeli Culture & Conversation Hebrew Film & Literature (SAS) Judaic Elective - Halacha
Elective(s)	SAS Studio Art (if taken jr. yr) SAS Music Theory Additional Science Additional Social Science Free Period	SAS Studio Art (if taken jr. yr) SAS Music Theory Additional Science Additional Social Science Free Period