



High School Program of Studies

2019.20

Course Registration

The SDJA Program of Studies document is intended to be a guide for parents and students to prepare for 2019.20 course registration. Please read the program information carefully and discuss potential course options as a family.

In the weeks leading up to the 2019.20 registration period, there will be dedicated time during pod and specific grade level academic advisory sessions for students to dialogue with teachers, department chairpersons and administrators. The schedule for the advisory aspect of course registration is communicated via email by the Dean of Academics.

Graduation Requirements

Athletics - participation in 1 sport per year

English - 4 years

Fine Arts - 1 year

History - 3 years (Hum 9, 10 and 1 year of US History is required)

Judaic Studies - 6 years (4 years of required Judaic Studies coursework and 2 years of Active Jewish Living, which can be fulfilled through Hebrew coursework, Judaic Studies coursework, experiential Jewish education, or any combination thereof)

Math - 3 years (Algebra 1, Geometry, and Algebra 2 are required)

Science - 3 years (Biology, and either Chemistry or Physics are required).

World Language - 2 years

Advanced Placement Program

Advanced Placement (AP) courses are created for The College Board by a panel of content experts and college-level educators. These classes are rigorous and demanding, and the workload is commensurate with college level courses. AP courses culminate in the spring with a national standardized exam. All SDJA students who enroll in an AP course should sit for the AP exam.

SDJA has twenty AP courses approved by the College Board for inclusion on the SDJA high school transcript. In order to maximize the number of AP course offerings, we offer approximately fourteen AP courses per academic year on a rotating basis.

Students who enter the AP program are those who exhibit requisite skills in the content area, critical thinking, independence, motivation, and the recognized degree of excellence as defined by each department. Any high school student in the sophomore, junior and senior classes who wishes to enroll in an AP course should meet with the department chair and/or an AP teacher to discuss the specifics regarding the course of interest.

Athletics

The San Diego Jewish Academy Athletic Department provides students the opportunities to learn and embody life lessons through participation in interscholastic sports. We support our students and coaches in creating experiences that will help to develop character traits such as commitment, a growth mindset and teamwork.

Interscholastic Sports

Fall

Cross Country (Boy's and Girl's)
Football (8-man)
Girl's Tennis
Girl's Volleyball

Winter

Boy's Basketball
Girl's Basketball
Boy's Soccer
Girl's Soccer
Sideline Cheer

Spring

Baseball
Coed Golf
Swimming (Boy's and Girl's)
Track & Field (Boy's and Girl's)
Boy's Tennis

Team Managers

There are a limited number of spots available as team managers for the sports listed above.

Our ability to offer these sports is directly related to student interest. Based on individual sport enrollment, the Athletic Director will determine which teams will be offered.

PE Classes

Wellness I

(Open to Grades 11-12 only)

Wellness I is a one semester course designed so all students acquire the basic knowledge about how to become fit and why it is important. Students will learn how to safely use various exercise equipment and stations in the fitness center. Instruction will focus on the components of fitness and how they contribute to optimal health. Principles of strength training, elements of cardiovascular health, basic anatomy and physiology,

and the elements of a personal fitness plan are topics covered during the course. This class will meet after school from 3:30pm-4:15pm on Mondays and Wednesdays.

Awake Personal Fitness

(Open to Grades 11-12 only)

This course provides an overview of fitness concepts, the effects of exercise on an individual and explores training programs specific to achieving optimal physical and mental health. This class is fitness based and students will have the option of two fitness tracks: Personal Fitness and Team Sports. Activities include, but are not limited to strength training, plyometric training, cardiovascular training, intervals and metabolic conditioning. Many training modalities will be utilized. Individual and class data will be collected and analyzed in order to provide maximum training benefits. Awake Fitness begins before the start of the school day at 7:20 am and ends at 8:10 am. This class will take place on Tuesday and Thursday mornings. Students will assess their levels of physical fitness. Participants will create a personal fitness program specific to individual needs.

ISPE

We recognize that some students pursue athletics and other non-CIF competitive activities at a high competitive level and to accommodate and support those students, SDJA offers ISPE as a way to earn athletic credit.

The ISPE. program at SDJA is designed with two goals:

1. To provide exceptionally gifted athletes who compete at a high regional or national level an opportunity to earn SDJA athletic credit for graduation while pursuing their sport off campus.
2. To provide students who are pursuing an in-depth study of an athletic or competitive dance discipline not offered as part of the SDJA curriculum an opportunity to earn athletic credit.

Computer Science

Introduction to Website Design and Development

This course will teach the essential elements of web page development, covering HTML, CSS and JavaScript as well as the fundamentals of SEO and cross-platform support and the basic design theory to put it all together. It will provide a general introduction to user interface design (UI), covering important design principles like visibility, error prevention, efficiency, and the human capabilities that motivate them. Students will consider the essential components of JavaScript, including variables, arrays, loops, and functions. Students will learn how to write code and use the fundamental techniques and programs necessary to put it all together to develop their own compelling, interesting, and complex cross-platform websites.

AP Computer Science Courses

AP Computer Science Principles

This course introduces students to the central ideas of computer science, inviting students to develop the computational thinking vital for success across multiple disciplines. Offering a broad introduction to the fundamentals of computing, including problem solving, working with data, understanding the Internet, cybersecurity, and programming, this course highlights the relevance of computer science by emphasizing the vital impact advances in computing have on people and society. Students will explore how computing and technology can impact the world, learn and apply the foundations of computer science to address real-world problems, and pursue personal interests in digital projects that showcase student creativity.

For a more detailed description and course outline, please see the College Board website,

<https://apstudent.collegeboard.org/apcourse/ap-computer-science-principles>.

AP Computer Science A

Prerequisite: Completion of Algebra I with a grade of B or higher

This full year course is recommended for students who are interested in learning how to program computers using the Java programming language, and for students who plan to take the AP Computer Science exam. This course is suited for disciplined students who are independent learners, critical thinkers and truly enjoy solving complex problems. This course builds upon a foundation of mathematical reasoning which is why a strong foundation in Algebra I is a prerequisite for the course. Java is the programming language specified by the College Board for the AP Computer Science exam. Students will need a laptop (Mac or PC), and will need to install jGRASP (a free, down-loadable program). jGRASP is an integrated development environment (IDE) for writing, compiling and running Java programs.

For a more detailed description and course outline, please see the College Board website,

<https://apstudent.collegeboard.org/apcourse/ap-computer-science-a>

Visual and Performing Arts

Ceramics/3D Design

The Ceramics/3D Design course is a studio art course that explores a variety of media used in the creation of sculptural forms. Clay and ceramic techniques are emphasized. Along with developing a solid skill set, students learn the principles of design and discover ways that they affect both realistic and abstract sculpture. Participation in this class will result in a body of work that can serve as a student portfolio.

Visual Art

The Visual Art course takes a projects based approach to investigate a variety of art media techniques including drawing, printmaking, and sculpture. Concepts of aesthetic valuing and art history are explored and reinforced throughout the studio art experience.

Photography and Video Production

The goal of the Photography and Video Production course is to establish a forum for students to create photographic works that are meaningful to them, that they enjoy, and that they are proud to share. Production and postproduction technical skills, including digital camera settings, editing, and Photoshop/Lightroom techniques are presented within the context of questions concerning intention, expression, beauty, and personal style. Historically significant artists are studied to discover their approach in resolving these issues, and to become aware of patterns in artistic rendering that have contributed to broad and enduring appeal. The course culminates in the production of a short film or portfolio created by class participants. Students participating in this class are expected to have access to a digital camera with manual settings and are strongly encouraged to start an Adobe Creative Cloud photography subscription.

Music Technology and Composition

This exciting course will unleash the creativity in students by exploring how music is created, edited, and recorded on computers. No experience is necessary and students do not have to know how to play an instrument to join the class. We will learn about audio formatting, studio technologies, basic recording procedures, basic keyboarding skills, and music composition using various forms of technology. Through demonstration, hands on practice, a field trip to a professional recording studio, and individual/group projects students will gain a better understanding of current music technology and production. Students will also make multi-track recordings and learn to use sampling software to create original music. An Apple computer or iPad with GarageBand installed is recommended but not required.

High School Music

This course is for the student who wants to learn to play an instrument in a fun and low stress environment. It is also for students with some experience on any instrument who would like develop their skills further. Through group lessons and extensive individual practice time, students will read music notation relevant to the applied literature, listen to/analyze/describe music, learn the historical and cultural attributes of music relevant to the course, and critically examine selections of music from various genres. Students taking this class are expected to supply their own instrument (with some exceptions), have a regular practice routine, and participate in at least 1 public concert.

Advanced Music

Advanced music is a one to three year performing ensemble for serious instrumental music students with at least 3 years of experience playing an instrument and reading music. Students improve their ensemble skills on a wind instrument, guitar, bass, stringed, or percussion instrument through the study of musical literature and performance in at least two public concerts. Small group ensembles formed from the larger group perform regularly at local community events. Students must be prepared to

participate in regular performances. Students also read music notation relevant to the applied literature, listen to/analyze/describe music, learn the historical and cultural attributes of music relevant to the course, and critically examine selections of music from jazz, blues, classical, and folk styles. Students taking this class are expected to supply their own instrument, have a regular practice routine, and participate in regular performances throughout the year.

The Coffeehouse Project

Stand up comedy, open mic night, improvs, scenes, cover songs, original music; play an instrument or sing a song. Read poetry-write poetry. Want to act? Dance? Direct? Try your hand at choreography? Make a film.... Write a script...Design costumes or sets. Perform a part of a play- a full play –or not a play at all. This is a drama course-but outside the box. Learn the basics, develop both individual and group projects that will perform on scheduled dates throughout the year when your projects are ready to be seen. Be a part of a beginning- help create 'Expressions Café'. Where what we do will be mostly up to you.

AP Art Courses

AP Studio Art (2D Design, Drawing)

The AP Studio Art program makes it possible for highly motivated students to work at the college level. The course requires demonstrating mastery of artistic concepts, composition, and execution. Students are required to submit a portfolio consisting of twenty-four artworks for evaluation by the College Board. The portfolios allow maximum freedom in the structure of the course and enable students to develop a concentration; a cohesive body of work investigating a strong underlying visual idea. Each portfolio will address the three major concerns of the College Board evaluation guideline.

Quality: Five works that show the highest achievement in art.

Concentration: A cohesive body of work investigating a strong underlying visual idea, design or drawing that grows out of a coherent plan of action or investigation.

Breadth: A body of work demonstrating understanding of the principles of design, including unity/variety, balance, emphasis, contrast, rhythm, repetition, proportion, scale and figure/ground relationship.

As with all AP classes, students can expect a significantly increased workload in AP Studio Art. Successful completion of Visual Art or Ceramic/3D Design is strongly suggested. If you are considering registering for AP Studio Art, it is highly recommended that you have a conversation with your art teacher, or arts department chair.

College Board link: <https://apstudent.collegeboard.org/apcourse/ap-studio-art-2-d-design>

Humanities

We teach and study the Humanities because we value the continued practice of deep thought about what it means to be human in both individual and collective experiences. The goal of our English classes at SDJA is to develop critical thinking, reading and writing skills so students can ultimately communicate with an articulate and confident voice, both written and oral, who we are and where our responsibilities lie. The goal of our history classes at SDJA is to empower students to make sense of our world today through a broad study of the past. English texts complement the historical units. As a whole, humanities classes provide material for continuing conversations and writing about what it means to be human in an ever changing world.

Core Courses

9th Grade Humanities (English 9 and History 9)

These two courses integrate history, culture, and the language arts to explore the theme, "What is our path?" The question is explored through our studies of world history and literature including poetry, short stories, novels, and nonfiction. Engaging and challenging texts refine students' critical reading skills and provide rich material for conversation and writing. Central to the courses are a practice in the development of personal style and fluency while writing the analytical essay. Students will have the opportunity to demonstrate their interpretations of historical events and of the literature studied in a number of visual projects as well. By delving into world history and literature, students will develop an understanding and explore their own opinions of our current civilization.

10th Grade Humanities (English 10 and History 10)

These two courses build upon the 6th, 7th, 8th and 9th grade themes through integrating history, culture, and the language arts to explore our vital humanities theme, "How are we to live?" These courses integrate world history with a particular emphasis on the Western perspective from mid-17th century to the 1950's and language arts where literature and writing often complement the historical periods and concepts. Students read and write in multiple genres to practice fluency of rhetoric and support opinions with credible, cogent evidence. Students write critiques, analyses, persuasive essays, reflective essays, character memoirs, and open letters as well as a number of journalism-themed synthesis pieces in forms such as editorial, obituary and feature articles. A focus on syntax and style as well as structure and content helps students develop maturity as writers to prepare for experiences as juniors and seniors. These courses often provide space for metacognitive reflection on how each individual learns, why they learn, and what kind of role each student wishes to play collectively in the world in which they live.

United States History

Students will gain an understanding of the major themes, individuals, and events that make up the vibrant historical tradition of the United States from European exploration to the present. A number of different approaches will be employed as students find out

how they can best engage with the material in a way that is meaningful to them and their individual experiences. Students will discuss current events and learn the historical roots of some of these issues that continue to be controversial in the modern era. Students will be expected to analyze written texts, to provide specific evidence in written and oral work to support their opinions, and to learn effective organization strategies and study habits.

Topics in Humanities

The humanities topics classes are year-long courses designed to provide in-depth exploration of content and development of skill in reading, writing, thinking, and listening. These courses provide English 11-12 or academic elective credit as noted.

World Literature: Explorations in Latin America

(Provides credit for English 11 or 12 or academic elective)

While much of our reading experience happens in our native tongue, the humanistic traditions have always been inspired and made possible by the mutual, cross-pollinating contacts between different societies, cultures, and civilizations, through their languages and literatures. Latin America offers the interested reader some of the world's richest literary cultures, an astonishing linguistic and cultural continuum that boasts a complex history and an ever-thriving, ever developing field of writing that draws inspiration from history and tradition, and the turbulence of modern times, one that celebrates and practices familiar forms and genres and invents new ones--a truly kaleidoscopic cosmos of writing. This year-long elective will explore, celebrate, analyze, and sometimes seek to emulate the examples of a wide variety of authors, titles, and forms from the dozens of countries that compose Latin America--from the Caribbean, Mexico, and Central America, throughout the immense continent of South America. Students will read writings in translation from Spanish, and Portuguese, as well as from some of the many indigenous tongues (Nahuatl, Maya, Quechua, et. al), as well as some writing in English from and about these places.

Literature and Film

(Provides credit for English 11 or 12, or academic elective)

....aaaaaand action! The purpose of this course is to study the parallel of narrative forms, genres, and techniques echoed in literature and film. We will learn to "read" a film, analyzing its narrative structure, genre conventions, subtext, technical and artistic factors, and purpose. Does the angle, ambient lighting or scenery hold symbolic meaning? Why does Hitchcock use aerial shots of a man being chased by an airplane as opposed to a close up of the man's horrified face? Selected short stories are read and analyzed in relation to film versions of the same works in order to gain an understanding of the possibilities, and problems, involved in the transposition to film. (In the film *Aviator*, Leonardo DiCaprio plays Howard Hughes. In one scene set in 1928, he orders "10 chocolate chip cookies". Ruth Graves Wakefield invented the chocolate chip cookie in 1930. That's called an anachronism folks, and we'll also be looking for them.) We will write film critiques, explore the way film can influence and manipulate perception, practice our abilities to compare and contrast short stories to their film

adaptation, examine how films often reflect the culture and times in which they are made, and conversely, how motion pictures sometimes help shape attitudes and values in society. In short, we will develop the habit of watching movies critically rather than passively. Some of the short stories and movies to be included in this course are: *Rear Window* (1954), based on Cornell Woolrich's "It Had to Be Murder," *The Fly* (1958) and *The Fly* (1986), based on George Langelaan's "The Fly," *Minority Report* (2002), based on Philip K. Dick's "The Minority Report," *Total Recall* (1990) and *Total Recall* (2012), based on Philip K. Dick's "We Can Remember it For You Wholesale," *The Curious Case of Benjamin Button* (2008), based on F. Scott Fitzgerald's "The Curious Case of Benjamin Button," *Stand By Me* (1986), based on Stephen King's "The Body".

Honors Humanities

Humanities 9 and 10 Honors

This extracurricular honors seminar is designed to create a vigorous exchange of ideas centered on our humanities themes for grades 9 and 10: "What is our path?" and "How are we to live?" Students will be reading challenging nonfiction and fiction; writing; listening; speaking; visiting local museums, theatres, and events; and participating in a minimum of four out of five seminars throughout the school year. Upon completion of requirements, students may earn honors credit for both literature and history classes for grades 9 and 10. All ninth and tenth grade students receive a calendar of seminars and an invitation to participate during the first month of school each year.

AP Humanities Courses

AP English Literature and Composition

This course includes intensive study of representative works from various genres and periods from the 17th to the 21st century, concentrating on works of literary merit. Goals of this course embody those of a freshman-level, college literature course. Most homework consists of reading approximately 40-60 pages between class periods, and all writing is done in class. Grades are based entirely on these in-class essays. The goal of the writing assignments, while primarily focusing on critical analysis of literature, is to increase students' ability to explain clearly, logically and even beautifully what they understand about literary works and why they interpret them the way they do. We will read thoroughly and deliberately, taking time to understand a work's complexity and to absorb and analyze its richness in meaning.

More information about AP Literature and Composition may be found on the College Board website: <https://apstudent.collegeboard.org/apcourse/ap-english-literature-and-composition>.

As with all AP classes, students can expect a significantly increased workload. If you are considering registering for this course, it is highly recommended that you have a conversation with your current English teacher and with the Humanities Department Chair.

AP English Language and Composition

Advanced Placement English language and Composition is a survey of and practice in rhetorical modes of composition. Reading focus is on non-fiction, especially short and long form essays. Goals of this course embody those of a freshman-level, college composition course. The material is rich and rigorous; the focus is on critical reading and writing via rhetorical analysis using largely non-fiction sources. Students will engage with language as readers and writers of multiple forms and contexts in a variety of subjects including American society, sports, popular culture, politics, education, the environment, and other topics. With an emphasis on close reading, analysis of textual mechanics and structure, and vocabulary study, students practice rhetorical analysis with the goal of becoming adept at literary analysis, multi-source synthesis, and argumentation. Students engage in regular short-form essay writing on a wide variety of topics, with opportunities for peer review and revision, and specific feedback from the instructor. Although not a creative writing class per se, students have regular and ample opportunities to exercise their creative faculties in writing. Students also engage in regular practice for the annual College Board AP examination given each spring. This involves working with actual test sources from previous years in exam situations, and close analysis of reading comprehension passages, multiple choice questions, and free response questions in the focus areas of literary analysis, synthesis, and argumentation.

More information about AP English Language and Composition may be found on the College Board website: <https://apstudent.collegeboard.org/apcourse/ap-english-language-and-composition>.

As with all AP classes, students can expect a significantly increased workload. If you are considering registering for this course, it is highly recommended that you have a conversation with your current English teacher and with the Humanities Department Chair.

AP United States History

This course, first and foremost, seeks to inspire students by highlighting the struggles of a relatively new country and evaluating its development up to present day. Such a meaningful understanding of American history derives from the fact that this class is taught at the college level. As such, students will hone skills most applicable to the successful completion of college-level history classes. In addition to memorizing, comprehending, and applying a great deal of facts, students will be required to frequently analyze, synthesize, and evaluate primary and secondary sources. They will apply chronological reasoning and engage in frequent comparison and contextualization. Scholarly interpretations of history are sprinkled throughout the course to familiarize students with lasting debates in historical scholarship as well. By the end of the year, students will have explored themes like identity; ideas, beliefs, and culture; environment and geography; immigration and social trends; work and technology; politics and power; and America's international presence. Students tend to find such a broad and vibrant coverage of American history extremely rewarding.

More information about AP United States History may be found on the College Board website: <https://apstudent.collegeboard.org/apcourse/ap-united-states-history>.

As with all AP classes, students can expect a significantly increased workload. If you are considering registering for this course, it is highly recommended that you have a conversation with your current history teacher and with the Humanities Department Chair.

AP European History

This course seeks to provide the equivalent to a college introductory course in European history for qualified students. Students will explore the cultural, economic, political, and social developments from 1450 onward that have significantly shaped the world in which they live. The course is both intense and demanding as students are expected to develop an understanding of the following themes in modern European history: Europe's interaction with the world; poverty and prosperity; objective knowledge and subjective vision; individuals and society, national and European identity; and states and other institutions of power. Along the way, students will build a thorough knowledge of key contributors to Europe's development, and analyze historical evidence as well as interpret history from multiple points of view. Finally, students will often be required to express their historical understanding of complex events in writing.

More information about AP European History may be found on the College Board website:

<https://apstudent.collegeboard.org/apcourse/ap-european-history>.

As with all AP classes, students can expect a significantly increased workload. If you are considering registering for this course, it is highly recommended that you have a conversation with your current history teacher and with the Humanities Department Chair.

AP U.S. Government and AP Macroeconomics

Have you ever dreamed of owning your own business? How might the actions of national, state, and local governments affect the decisions that you make in your quest to become a successful entrepreneur? Have you ever dreamed of going into government service? How might economic motivations and trends inform the policy decisions that you might make?

In this course, two AP courses which are typically taught in two separate semesters of an academic year will be combined and studied in conjunction throughout the year. After gaining an understanding of the basic Constitutional framework, institutional development, and bureaucratic structure of American government, students will learn the foundational concepts of a capitalist economy. Then throughout the year students will explore the close interrelationship between government policies and economic conditions. Through research, analysis, and debate of relevant contemporary issues, students will also learn how to formulate, articulate, and support with factual evidence their opinions on the challenges facing our country today. In their efforts to promote full

employment and ensure a decent standard of living for all Americans, lawmakers must frequently grapple with the competing aims of social justice, by tackling such issues as poverty, stagnant wages, inequality of income, and unemployment, and economic growth by maintaining a competitive and prosperous business environment. All of these issues will be examined against the backdrop of political parties, PACs, elections, interest groups, and the media, so that students will complete the year with the knowledge and skills necessary to take the AP test in both Macroeconomics and U.S. Government. Students will receive one semester credit each for AP US Government and AP Macroeconomics (to make for a year's worth of AP credit).

More information about AP U.S Government and AP Macroeconomics may be found on the College Board website: <https://apcentral.collegeboard.org/courses/ap-united-states-government-and-politics/course> and <https://apcentral.collegeboard.org/courses/ap-macroeconomics/course>

As with all AP classes, students can expect a significantly increased workload. If you are considering registering for this course, it is highly recommended that you have a conversation with your current social studies teacher and with the Humanities Department Chair.

AP Psychology

AP Psychology is the equivalent of a one semester college introductory psychology course. This rigorous course introduces students to the systematic study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts and phenomena associated with a broad range of topics in psychology. Areas of study include the biological basis of behavior, sensation and perception, learning and cognition, motivation and emotions, developmental psychology, abnormal psychology and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations and statistics, as they use the scientific method, analyze bias, evaluate claims and evidence and effectively communicate ideas.

More information about AP Psychology may be found on the College Board website: <https://apstudent.collegeboard.org/apcourse/ap-psychology>.

As with all AP classes, students can expect a significantly increased workload, particularly in regards to reading. If you are considering registering for this course, it is highly recommended that you have a conversation with your current social science teacher and with the Humanities Department Chair.

Practical Arts

Journalism (*The Lions' Den* student newspaper): This course provides a workshop setting in which students communicate through teamwork, writing, design, and technology. Students will be staff members on *The Lions Den* which is published

regularly in an ongoing, rolling format vis-a-vis our newspaper's Wordpress site. A primary goal of this course is to instill a passion for clear communication and creative, collaborative problem-solving through effective writing, design, and layout. The adviser, editor-in-chief, and section editors facilitate as-needed, on-demand requirements with customized instruction to a staff member's level of experience. Staff members sign up for this class during the first two weeks of school each year. In addition to staff meetings during pod every other day, students must be prepared and willing to accomplish journalistic assignments beyond class and school hours in order to cover athletics, volunteer, and arts events in the afternoon and evenings, and to meet deadlines as assigned by the advisor and editor-in-chief. Student journalists will learn the basics of effective reporting including professional reporting techniques, including the art of interviewing (vital for effective news stories and features), and lede, headline, and caption writing. Newspaper responsibilities also include use of computer technology, photography, audio and video recording of interviews and news stories, and computerized layout and design.

Yearbook (*The Roar*) and Literary Magazine (*Eighteen*): This course provides a workshop setting in which students communicate through teamwork, writing, design, and technology. Students create two Maimonides Upper School publications: *The Roar* (yearbook) and *Eighteen* (literary arts magazine). A primary goal of this course is to instill a passion for clear communication and creative problem-solving. The adviser, editor-in-chief, and section editors facilitate as-needed, on-demand requirements with customized instruction to a staff member's level of experience. All yearbook/magazine staff members apply for a position on the staff during February each year and are notified of acceptance prior to registration. In addition to staff meetings during class time, publication responsibilities often extend beyond school hours to cover athletic, volunteer, and arts events in the afternoon and evenings.

Judaic Studies

The goal of the Judaic Studies program in the Maimonides Upper School is to provide robust opportunities to study Jewish text, history, rituals, values, and connection to Israel in ways that are personally meaningful to each individual student. Our students come from a wide range of Jewish backgrounds, and we take pride in fostering each student's intellectual and emotional Jewish development. Judaic Studies students engage in learning through a variety of methods, including journaling, discussion, debates, and projects that bring traditional ideas into modern-day relevance. We actively encourage critical thinking, reflection, and other skills that serve them well in all disciplines.

9th Grade: God, Torah, and Israel: A Conceptual Introduction to Judaism

In this course we'll discuss the four most important Jewish ideas – the concepts that both distinguish Judaism from other civilizations and that give Judaism its unique

standing in the world of ideas, culture, tradition, and way of life. The ideas are: God, Torah, Israel, and Tikkun Olam (Jewish ethics).

We'll deeply examine each of these concepts using a variety of ancient and modern Jewish sources (more ancient than modern). Most of our class time will be devoted to in-depth study of Jewish texts in groups (hevruta), where we'll unpack the meanings and ideas in the texts, and figure out how to apply them to our lives today as Jews and Americans in San Diego.

We'll grapple critically and seriously with all the texts and ideas. However, we'll study all the sources in English translation, and carefully explain all the concepts. We'll also embrace a pluralistic approach, mirroring the clear Jewish love of argument and the healthy (and civil) clash of opinions.

12th Grade: Senior Seminar – History of Modern Israel and the Holocaust

This required course will move chronologically through the history of modern Israel and the history of the Holocaust. The purpose of this course is to imbue you with the knowledge of this time period and to focus on how the facts and skills you learn will enable you to succeed on college campuses and beyond. As intelligent human beings we all know about the Holocaust, but do we know how to identify and prevent future human rights violations that lead to genocide? This course will empower you to identify dangerous policies that appear to be benign on the surface, but have a much more sinister intent embedded within them – killing is never the first step. Furthermore, think about how you might feel if a college classmate, or student organization, goes on a rant about how Israel only earned statehood because of the Holocaust and it's time we stop feeling sorry for them; after all, look at how they treat the Palestinians. This course will empower you to respond intellectually rather than emotionally. Finally, this course will act as the preparation for your trip to Poland and Israel this coming spring.

10th/11th Grade: Judaic Studies Pathways

In the SDJA Pathways program, sophomores and juniors design an individualized learning program that is aligned with their Jewish identity, curiosity and interests. Students choose from one of five different pathways in which to “major” during their sophomore and junior years, or sample each pathway in a blended option.

Pathway 1: Jewish Text

Survey of Rabbinic Literature Honors

Part of what makes Jewish text unique is that the tradition of study and interpretation does not end with the Hebrew Bible. In fact, the word “Torah” comes from the same Hebrew root as “Morah” and means “teaching”. For the past 2,000 years, the Jewish people have understood the value of interpreting text, and our literary history is filled with countless attempts to derive meaning from our ancient teachings. In this class, we will examine the early rabbinic works - Mishnah, Midrash, and Talmud - as we gain an

appreciation for these collections of rabbinic wisdom and begin to understand how to apply those teachings to our own lives.

Tanakh: For Mature Audiences Only

Everybody knows the stories of Noah's Ark and the Garden of Eden. But the reason that the Hebrew Bible has been the central book in the Jewish experience is that it contains lessons contains many more stories that you don't study in elementary school. This course will explore some of these stories, and will focus on the moral challenges faced by some of the most celebrated Biblical figures, and others you may never have heard about. Among the characters we will study are Judah, Yael, King Saul, King David, and Jephthah.

Pathway 2: Jewish Values

Jewish Ethics Honors

The right choice is often not the easy choice - but it's also not always apparent. In this course, students will explore the assumption that the ethical issues that people faced 3000-4000 years ago are, fundamentally, the same issues we face today. We will study the ways our ancestors grappled with universal ethical dilemmas and how these seemingly antiquated stories can teach us all sorts of lessons about how to live our own lives. We will examine how Jewish ethical thought has changed over time, from Biblical times to the 20th century. In addition to different content areas – medical ethics, business ethics, family ethics, and so on – we will also explore the enduring principles of Jewish ethics, namely urgency, proximity, and utilitarianism.

Jewish Value from the Rabbis

What makes for a sincere and authentic Jewish life? What personality traits does Judaism most value, and why? What's the key to happiness? How can Jewish wisdom help us make better decisions? How do we set priorities, so we can be most helpful to others? What does it mean to learn, and why is learning so important?

In this class we'll study Pirkei Avot, the ancient Jewish text that's most relevant in answering the above questions, and helping everyone live a deeply ethical life. We'll study the entire book, mostly in English, but with some use of the original Hebrew and Aramaic. We'll use close reading techniques to dig down deep and ponder all of the nuances of this fascinating collection of stories, sayings, and wisdom. We'll also use modern culture, including contemporary songs, books, and films, as a way to better understand Pirkei Avot's most interesting ideas. Students will engage in extensive written work, the arts, and debate to help us all better understand the material.

Pathway 3: Jewish History

American Jewish History

What is your American Jewish identity? What is the American Jewish experience throughout history? How do the values of community, responsibility, compassion, and innovation play a role in this experience? Through deliberate infusion of Jewish values

into memorable and engaging experiences, this course will explore the formation of Jewish identity using hands on activities. We will derive meaning from these values and explore them more deeply by examining both primary and secondary source documents from the history of Jews in America.

Students will explore the ways Jewish tradition has adapted to America, how patterns of communal life have been transformed, what the relationship of American Jews has been to other Americans and to the international Jewish community, and how American Jewish identities have been created from Jews' dual impulses for integration and distinctiveness.

Great Jewish Thinkers

This course serves as an introduction to the development of Jewish philosophy and thought over the past millennium. Students will survey some of the great Jewish thinkers throughout Jewish history, from Saadia Gaon to Moses Mendelssohn, from Maimonides to Mordechai Kaplan. These intellectuals have influenced not only Jewish philosophy, but in turn have affected the ways that Jewish communities everywhere have studied, practiced, and lived. Students will also discuss the connections, parallels, and influences between Jewish ways of thought and philosophy in general.

Pathway 4: Jewish Practice

The Jewish Calendar

Many of us start learning about and/or celebrating Jewish holidays early in our lives - but we often don't stop to consider the deeper meanings of the holidays or the structure of the Jewish calendar year. What does celebrating freedom on Passover really mean? Why do we have two separate holidays celebrating the Torah? Why is Rosh Hashanah barely mentioned in the Torah? And how can the Jewish calendar be both lunar *and* solar? We will explore these questions and countless others as we take a sophisticated approach to understanding the rhythms and cycles of the Jewish calendar year.

Jewish Reflective Practice

Is God dead? What is the difference among prayer, tefilah, and minyan? In this course we will explore the age-old practice of Jewish *tefilah* by examining the *siddur* - the Jewish prayer book. For many, the *siddur* is the bedrock of Jewish practice. Whether one opens the *siddur* three times a day or three times a year, the contents reveal much about the inner workings of Judaism and its evolution over time. In this course, students will become familiar with the structure and outline of the Jewish prayer service, from the most fundamental (*Shema, Amidah*) to the more obscure (*Tahanun*, prayer for rain). We will also highlight some of the liturgical differences among the various denominations, and explore the fundamental reasons that those differences exist. By the end of this course, students will gain an understanding of the pivotal role that the *siddur* has played in bringing together Jewish communities for generations.

Pathway 5: Israel

The Zionist Idea

Although Jews have maintained a consistent presence in the land of Israel for thousands of years, there was a gap of nearly two millennia between the exile in the aftermath of the destruction of the Second Temple and the founding of the modern State of Israel in 1948. An in-depth study of the history of Zionism will help students uncover the answers to many essential questions. What was it that inspired the early Zionists of the 19th and 20th centuries to renew with earnest the quest to reestablish the Jewish homeland? How was the Zionist movement able to gain so much momentum and popularity? How united was the Zionist movement? How has the movement evolved over time? In order to begin to answer these questions, students will utilize a combination of primary and secondary sources from many prominent Zionist thinkers, including Moses Hess, Leo Pinsker, Theodor Herzl, Achad Ha'am, and many more.

The Diverse Tribes of Modern Israel

This course is adapted from the celebrated course of the same title created by the Hartman Institute, an internationally renowned Israel education institution. This course confronts the challenge of creating a Jewish and democratic public space in the modern State of Israel—a shared common space for a people divided along “tribal” affiliations: religious, ideological, national, and geographic. What is the significance of the State of Israel as a Jewish public sphere? How does a people divided along religious, geographic, and ideological lines build a shared society? The Tribes of Israel begins a conversation to restructure the relationship between the collective and the individual tribes that comprise Israel.

Jewish Values and the Israeli-Palestinian Conflict

This course is adapted from the celebrated course of the same title created by the Hartman Institute, an internationally renowned Israel education institution. It explores one of the most divisive issues affecting the Jewish people today. Through the study of Jewish narratives about Israel and the unpacking of the complex meanings of peace in Jewish tradition, participants are invited to explore the ideas and values that animate different attitudes toward the conflict and how these values shape their own political understandings. Though a common political platform may not be attainable, this course strives to achieve a shared respect for our differences.

Math

Our math department strives to create a positive and nurturing environment in which students are comfortable with the learning process where making mistakes, taking risks, communicating ideas and working collaboratively are encouraged. A strong emphasis is placed on the conceptual understanding of mathematics so students can explain why the math makes sense. Meaningful real-world applications are consistently incorporated to develop creative problem solving skills as well as an appreciation of math and its relationship to other disciplines.

Examples of High School Math Course Pathways

Pathway 1: Algebra I → Geometry → Algebra II → Precalculus, Statistics, or Calculus

Pathway 2: Algebra I → Geometry → Algebra II H → Calculus, AP Calculus AB, or AP Statistics

Pathway 3: Algebra I → Geometry H → Algebra II H → Calculus or AP Calculus AB

Pathway 4: Algebra IH → Geometry H → Algebra II H → Calculus or AP Calculus AB

Pathway 5: Geometry H → Algebra II → Calculus → AP Calculus AB

Pathway 6: Geometry H → Algebra II H → AP Calculus AB → AP Calculus BC

Pathway 7: Geometry H → Algebra II H → AP Calculus AB and AP Stats as elective → AP Calculus BC and AP Computer Science Principles or AP Computer Science A as elective

Core Courses

Algebra I

Prerequisites: Math 8 with passing grades both semesters

This course provides the basic building blocks necessary to all higher level mathematics courses. It utilizes a hard copy text and a computer based program that includes an online textbook as well as additional multimedia resources designed to enhance student learning. The course emphasizes applications of mathematical concepts in the real world and balances the importance of both conceptual understanding and procedural fluency. Students use the graphing calculator as a tool to enrich conceptual learning and problem solving. Unit topics covered in this course include the following: numbers and expressions; equations and functions; linear and exponential relationships; statistics and data; polynomial expressions and equations; and functions and modeling.

Note: Please reference the early February email you received from your current teacher stating which math course you qualify for in the 2019-2020 school year. If you have any questions regarding the math course you qualify for, please contact your math teacher or the math department chair.

Geometry

Prerequisites: Algebra I with passing grades both semesters

This course utilizes a hard copy text and a computer based program that includes an online textbook as well as additional multimedia resources designed to enhance student learning. The course focuses on applications of mathematical concepts in the real world and balances the importance of conceptual understanding with procedural fluency. Students use the graphing calculator as a tool to enrich conceptual learning and problem solving. Students learn and apply properties of geometrical objects and develop their ability to construct formal, logical arguments and proofs in geometric settings. Unit topics include: tools of geometry; transformations and symmetry; lines,

angles, and triangles; quadrilaterals and coordinate proof; similarity; trigonometry; properties of circles; and measurement and modeling in two and three dimensions.

Note: Please reference the early February email you received from your current teacher stating which math course you qualify for in the 2019-2020 school year. If you have any questions regarding the math course you qualify for, please contact your math teacher or the math department chair.

Algebra II

Prerequisites: Algebra I and Geometry with passing grades all semesters

This course utilizes a hard copy text and a computer based program that includes an online textbook as well as additional multimedia resources designed to enhance student learning. The course focuses on applications of mathematical concepts in the real world and balances the importance of conceptual understanding with procedural fluency. Students use the graphing calculator as a tool to enrich conceptual learning and problem solving. Unit topics include: functions; quadratic functions, equations, and relations; polynomial functions, expressions, and equations; rational functions, expressions, and equations; exponential and logarithmic functions and equations; trigonometric functions. Please note that this course does not prepare students for AP Calculus.

Note: Please reference the early February email you received from your current teacher stating which math course you qualify for in the 2019-2020 school year. If you have any questions regarding the math course you qualify for, please contact your math teacher or the math department chair.

Electives

Precalculus

Prerequisites: Algebra II with a grade of C or higher both semesters

This course reviews the fundamental concepts of Algebra I and explores in greater depth topics introduced in Algebra II, particularly the graphical behavior of parent functions (specifically polynomial and rational functions, exponential and logarithmic functions, and trigonometric functions) and associated transformations. New content includes topics in trigonometry, sequences, and probability. Additionally, there is a strong emphasis placed on using mathematical models to predict phenomena in everyday life. The graphing calculator plays a role as an enrichment tool for solving math problems and modeling real-world scenarios.

Note: Please reference the early February email you received from your current teacher stating which math course you qualify for in the 2019-2020 school year. If you have any questions regarding the math course you qualify for, please contact your math teacher or the math department chair.

Statistics

Prerequisites: Algebra II with a grade of C- or higher both semesters

This introductory statistics course discusses the art, science, use, and misuse of statistical data. Through hands-on activities, projects and extensive work with TI-84 calculators, students will explore the following topics: quantitative and categorical data; display of data using appropriate graphs and charts; normal distributions; scatterplots and correlation; sampling, surveys, and experiments; and chance and probability. This is a very language-intensive course that examines statistics through applications. Strong language and reading comprehension skills are required for success in this course.

Note: Please reference the early February email you received from your current teacher stating which math course you qualify for in the 2019-2020 school year. If you have any questions regarding the math course you qualify for, please contact your math teacher or the math department chair.

Calculus

Prerequisites: Precalculus with a grade of B or higher both semesters, Algebra II with a grade of 97% or higher both semesters plus departmental approval, or Algebra II Honors with a grade of C or higher both semesters

This non-AP calculus course will provide students with a stronger background in Algebra II and Precalculus concepts and a foundation in trigonometric functions, limits, derivatives and integrals. The focus of the course will be real-world applications in business, economics, and social and life sciences. The course will emphasize a multi-representational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. This class is intended for students who wish to pursue a rigorous mathematical path without the pacing required for an AP Calculus course and/or need additional time studying essential Algebra II and Precalculus concepts and skills. The successful student for this course will have a strong background in Algebra II knowledge and graphing calculator skills.

Note: Please reference the early February email you received from your current teacher stating which math course you qualify for in the 2019-2020 school year. If you have any questions regarding the math course you qualify for, please contact your math teacher or the math department chair..

High School Instructional Assistant for Middle School Math Lab

Prerequisite: Departmental approval

Are you a high school student who loves math and enjoys helping others? Are you the one your friends or siblings rely on to help them with math? Are you the math tutor in your neighborhood? Are you a camp counselor? If you answered yes to at least two of these questions, then this may be the class for you! The math department is looking for high school instructional assistants in the middle school Math Lab. You will be providing direct instructional and motivational support to students, as well as assisting the Math Lab teacher in finding suitable math exercises to help the students grow as math

learners. To sign up for this class, first contact your math teacher for the required recommendation.

Honors Courses

Algebra I Honors

Prerequisites: Math 8 with a grade of 95% or higher both semesters and departmental approval.

This course provides the basic building blocks necessary to all higher level mathematics courses, particularly AP Calculus. It utilizes a hard copy text and a computer based program that includes an online textbook as well as additional multimedia resources designed to enhance student learning. The course emphasizes applications of mathematical concepts in the real world and balances the importance of both conceptual understanding and procedural fluency. Students use the graphing calculator as a tool to enrich conceptual learning and problem solving. Unit topics covered in this course include the following: numbers and expressions; equations and functions; linear and exponential relationships; statistics and data; polynomial expressions and equations; and functions and modeling.

Note: When both a regular college preparatory level and an honors level of the same class are offered, the honors class is characterized by a faster pace, greater depth of content (and in some cases, includes additional content and different textbooks), more rigorous problem sets, and expectations of high quality student work on challenging problems and projects. The knowledge and skills acquired in this course, including proficiency with the material as well as comfort with the fast pace, are critical building blocks for success in future courses such as Algebra II Honors and AP Calculus.

Note: Please reference the early February email you received from your current teacher stating which math course you qualify for in the 2019-2020 school year. If you have any questions regarding the math course you qualify for, please contact your math teacher or the math department chair.

Geometry Honors

Prerequisites: Algebra I with a grade of 95% or higher both semesters plus departmental approval or Algebra I Honors with a grade of B or higher both semesters plus departmental approval.

This proof-based course utilizes a hard copy text and a computer based program that includes an online textbook as well as additional multimedia resources designed to enhance student learning. The course focuses on applications of mathematical concepts in the real world and balances the importance of conceptual understanding with procedural fluency. Students use the graphing calculator as a tool to enrich conceptual learning and problem solving. Students learn and apply properties of geometrical objects and develop their ability to construct formal, logical arguments and proofs in geometric settings. Unit topics include: tools of geometry; transformations and symmetry; lines, angles, and triangles; quadrilaterals and coordinate proof; similarity;

trigonometry; properties of circles; measurement and modeling in two and three dimensions; and probability.

Note: When both a college preparatory level and an honors level of the same class are offered, the honors class is characterized by a faster pace, greater depth of content (and in some cases, includes additional content and different textbooks), more rigorous problem sets, and expectations of high quality student work on challenging problems and projects. The knowledge and skills acquired in this course, including proficiency with the material as well as comfort with the fast pace, are critical building blocks for success in future advanced math courses.

Note: Please reference the early February email you received from your current teacher stating which math course you qualify for in the 2019-2020 school year. If you have any questions regarding the math course you qualify for, please contact your math teacher or the math department chair.

Algebra II Honors

Prerequisites: Geometry with a grade of 97% or higher both semesters and departmental approval or Geometry Honors with a grade of B or higher both semesters and departmental approval

This AP Calculus preparatory course focuses on the algebraic, geometric, and trigonometric techniques needed in the study of calculus, and strengthens students' conceptual understanding of the mathematical analysis and reasoning involved in solving problems. Students will use particular types of functions to model behavior in the real world and will be expected to find and interpret solutions analytically, numerically, graphically, and verbally. The graphing calculator plays a role as an enrichment tool for solving math problems and modeling real-world scenarios. In order to be successful in this course, students must have a strong working knowledge of Algebra I content at the Honors level. Unit topics for this course include: equations and inequalities, graphs and functions, polynomial and rational functions, inverse functions, exponential functions, logarithmic functions, trigonometric functions, the circular functions and their graphs, trigonometric identities and equations, applications of trigonometry, systems and matrices, analytic geometry, and sequences and series.

Note: When both a college -preparatory level and an honors level of the same class are offered, the honors class is characterized by a faster pace, greater depth of content (and in some cases, includes additional content and different textbooks), more rigorous problem sets, and expectations of high quality student work on challenging problems and projects. This course requires diligence and hard work, as well as a willingness to put in significant time and effort outside of the classroom (in Pod and/or at home).

Note: Please reference the early February email you received from your current teacher stating which math course you qualify for in the 2019-2020 school year. If you have any questions regarding the math course you qualify for, please contact your math teacher or the math department chair.

AP Math Courses

AP Statistics

Prerequisites: Precalculus with an A- or higher both semesters and departmental approval or Algebra 2 Honors with a grade of B or higher both semesters and departmental approval or Algebra II with a 97% or higher both semesters and departmental approval

This course is the high school equivalent of a one semester, introductory college statistics course. In this course, students develop strategies for collecting, organizing, analyzing, and drawing conclusions from data. Students design, administer, and tabulate results from surveys and experiments. Probability simulations aid students in constructing models for chance behavior. Sampling distributions provide the logical structure for confidence intervals and hypothesis tests. Students use a graphing calculator and Web -based java applets to investigate statistical concepts. To develop effective statistical communication skills, students are required to prepare frequent written and oral analyses of real data. In order to be successful in this course, students must have a strong working knowledge of Algebra I and II content, as well as high reading comprehension levels and the ability to write analytically.

Note: As with all AP classes, students can expect a significantly increased workload even if they are used to taking honors math classes. If you are considering taking an AP math course, please first check with your current math teacher to see if you qualify for the course. It is highly recommended that you follow up and have a conversation with your current math teacher and/or the Math Department Chair regarding the math course you have selected.

For more a detailed description and course outline, please see the College Board website, <https://apstudent.collegeboard.org/apcourse/ap-statistics>.

AP Calculus AB

Prerequisites: Algebra II Honors with a grade of B or higher both semesters and departmental approval or Calculus with a grade of B or higher both semesters with departmental approval

AP Calculus is an extremely rigorous and fast-paced course primarily concerned with developing students' understanding of the concepts of calculus and providing experience with its methods and applications. The course emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed graphically, numerically, analytically, and verbally. The connections among these representations are demonstrated through the unifying themes of derivatives, integrals, limits, approximation, applications, and modeling. Furthermore, students will use technology to explore, experiment, interpret results, and support their conclusions. In order to be successful in this course, students must have a strong working knowledge of Algebra II content at the Honors level, which places a particular emphasis on the topics and techniques required for the study of calculus. Students who did not receive a teacher recommendation for AP Calculus AB after completing Algebra II at the Honors level and/or who have not completed Calculus are not recommended to take this course.

Note: If you are considering taking an AP math course, please first check with your current math teacher to see if you qualify for the course. It is highly recommended that you follow up and have a conversation with your current math teacher and/or the Math Department Chair regarding the math course you have selected.

For a more detailed description and course outline, please see the College Board website, <https://apstudent.collegeboard.org/apcourse/ap-calculus-ab>.

AP Calculus BC

Prerequisites: AP Calculus AB with a grade of B or higher both semesters and departmental approval

In this class, students explore the key concepts, methods, and applications of single-variable calculus including all topics covered in AP Calculus AB (functions, graphs, and limits, derivatives, integrals, and the Fundamental Theorem of Calculus) as well as additional topics in differential and integral calculus, such as parametric, polar and vector functions, and series. Students become familiar with concepts, results, and problems expressed in multiple ways including graphically, numerically, analytically, and verbally. There will be an emphasis on using technology to help solve problems, experiment, interpret results, and support conclusions. This class is recommended for students who are passionate about higher level mathematics and plan to pursue a STEM path in college.

Note: If you are considering taking an AP math course, please first check with your current math teacher to see if you qualify for the course. It is highly recommended that you follow up and have a conversation with your current math teacher and/or the Math Department Chair regarding the math course you have selected.

For a more detailed description and course outline, please see the College Board website, <https://apstudent.collegeboard.org/apcourse/ap-calculus-bc>.

Science

The mission of the science department at SDJA is to promote scientific literacy. We want our students to be curious about both the physical and living world. Classes are designed so that students focus on big ideas in science, and develop critical thinking skills, the ability to design an experiment, collect, analyze, and interpret data, and support a conclusion with scientific evidence. Through lab inquiry, scientific observation, reading scientific material, writing about science, and scientific problem solving, students come to understand science as a process for investigation and discovery.

Biology

Prerequisites: None

Biology is focused on giving students the opportunity to explore the living world around them through a variety of lenses. From in class discussions and debates to online simulations and lab investigations; students will focus on five main topics throughout the year. They include the Biology of Learning, Cell Biology, Genetics, Evolution, and Ecology. Another main focus, beyond the content of the course, is skill building. Communication, problem solving, and critical thinking skills will be challenged and strengthened as students progress through the first level of the high school curriculum. Threaded through the entire course is the idea of Sustainability so that SDJA students begin to understand how the choices made everyday have impacts on a much grander scale. As an integrated part of Biology, students will participate in the LionScience Project where they will work on a real world problem of their choice.

Chemistry

Prerequisites: Algebra 1 (Grade of B or higher)

This laboratory based course in high school chemistry will teach concepts through real world applications. Using a guided inquiry framework and hands on learning, students will engage in learning, explore the concepts using projects, basic math skills, and labs and activities, then explain and elaborate what they have learned. The material is arranged around general themes, such as smells, weather and toxins to help connect the world that the student can relate to with the corresponding body of chemistry content. For example, students will investigate the chemistry of smell by learning about molecular properties, formulas, bonding and shapes and structures of molecules. Prepare to be engaged and to participate in the amazing, often unseen world of chemistry! As an integrated part of Chemistry, students will also participate in the LionScience Project where they will work on a real world problem of their choice.

Physics/Engineering

Prerequisites: None

Have you ever wondered why all objects fall at the same speed or why light bends when it passes close to the sun, or even why time stops at the speed of light? Are you interested in how engineers use math and science to solve problems and invent new products? In this integrated course, students will engage with traditional physics material, including gravity, motion, sound, light and electricity. The course will focus on the real world application of these physics principles through a variety of engineering projects and students will become familiar with the basic disciplines, practices and principles of computer, electrical and mechanical engineering. The course will culminate in a team-based capstone project.

Anatomy and Physiology

Prerequisites: Biology

Anatomy and Physiology is an introduction to the basic concepts and principles of human anatomy and physiology. Emphasis is placed upon the understanding of the human body at different levels of sophistication i.e., from the molecular level to the body as a whole, as well as how aspects of our everyday lives impact the different systems of the body. Students will begin the year diving into the ins and outs of each of the systems (cardiovascular, respiratory, nervous, skeletomuscular, digestive, etc),

discovering both the anatomy (structure/parts) and physiology (function) of each. Students will then explore how each system functions (or dysfunctions) when influenced by nutrition, sleep, stress, drugs/alcohol, mindset, meditation, etc; ultimately concluding with the concept that all systems are interdependent of one another.

Students will experience Anatomy and Physiology through questioning and curiosity, investigations, labs/experiential projects, and problem solving real world issues, guiding them to become curious, independent thinkers. As an integrated part of Anatomy and Physiology, students will also participate in the LionScience project where they will work on a real world topic of their choice.

Marine Science

Prerequisites: Biology, Chemistry

As residents of San Diego, students at SDJA have a unique opportunity to explore the marine environment. The ocean covers more than 70% of our planet and is filled with some of the smallest organisms on our planet, some of the most unusual plants, and some of the most majestic animals. In this class students will explore the marine environment through exciting inquiry based activities and labs, group and individual projects, guest speaker presentations and field trips. As an integrated part of Marine Science, students will participate in the LionScience Project where they will work on a real world problem of their choice.

AP Science Courses

AP Biology

Prerequisites: Biology (Grade of A-), Algebra II (or concurrent), and Chemistry (Grade of A- or higher); or Science Department recommendation)

AP Biology is the equivalent of a two-semester college introductory biology course. This rigorous course is based on four big ideas, which encompass core scientific principles, theories and processes that cut across traditional boundaries and provide a broad way of thinking about living organisms and biological systems. Students cultivate their understanding of Biology through inquiry-based investigation as they explore topics in evolution, cell biology including cell communication and energy, genetics, molecular genetics including biotechnology, and ecology. At least 25% of class time will be spent in the laboratory, with an emphasis on inquiry based investigations that provide students with opportunities to apply science practices including using representations and models, planning and implementing data collection strategies, performing data analysis, and using math and statistics.

More information about AP Biology can be found on the College Board website:
<https://apstudent.collegeboard.org/apcourse/ap-biology>.

As with all AP classes, students can expect a significantly increased workload in AP Biology. If you are considering registering for AP Biology, it is highly recommended that you have a conversation with your science teacher or the Science Department Chair (Dr. Eisen).

AP Environmental Science

Prerequisites: Biology (Grade of A- or higher), Algebra II (or concurrent), and Chemistry (Grade of A- or higher), or Science Department recommendation)

AP Environmental Science is the equivalent of a one semester college introductory course in Environmental Science. In this rigorous course students engage with the scientific principles, concepts and methodologies required to understand the interrelationships of the natural world. Students will identify and analyze natural and human-made environmental problems, evaluate relative risks associated with these problems, and examine alternative solutions for resolving or preventing them. AP Environmental Science is an interdisciplinary course embracing topics from geology, biology, environmental studies, environmental science, chemistry and geography. At least 25% of class time will be spent in the laboratory, with an emphasis on inquiry based investigations that provide students with opportunities to apply science practices including using representations and models, planning and implementing data collection strategies, performing data analysis, and using math and statistics.

More information about AP Environmental Science can be found on the College Board website: <https://apstudent.collegeboard.org/apcourse/ap-environmental-science>.

As with all AP classes, students can expect a significantly increased workload in AP Environmental Science. If you are considering registering for AP Environmental Science, it is highly recommended that you have a conversation with your science teacher and the Science Department Chair (Dr. Eisen).

AP Physics 1

Prerequisites: Algebra 1, Geometry and Algebra II (or concurrent)

AP Physics 1 is the equivalent of the first semester of an introductory, algebra-based Physics college course. This rigorous course is based on six big ideas, which encompass core scientific principles, theories and processes that cut across traditional boundaries and provide a broad way of thinking about the physical world. Students cultivate their understanding of Physics through inquiry-based investigation as they explore principles of Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. At least 25% of class time will be spent in the laboratory, with an emphasis on inquiry based investigations that provide students with opportunities to apply science practices including using representations and models, planning and implementing data collection strategies, and performing data analysis.

More information about AP Physics 1 can be found on the College Board website: <https://apstudent.collegeboard.org/apcourse/ap-physics-1>.

As with all AP classes, students can expect a significantly increased workload in Physics 1. If you are considering registering for AP Physics 1, it is highly recommended that you have a conversation with your science teacher and the Science Department Chair (Dr. Eisen).

AP Physics 2

Prerequisites: AP Physics 1

AP Physics 2 is the equivalent of the second semester of an introductory, algebra-based Physics college course. This rigorous course is based on seven big ideas, which encompass core scientific principles, theories and processes that cut across traditional boundaries and provide a broad way of thinking about the physical world. Students cultivate their understanding of Physics through inquiry-based investigations as they explore topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics. At least 25% of class time will be spent in the laboratory, with an emphasis on inquiry based investigations that provide students with opportunities to apply science practices including using representations and models, planning and implementing data collection strategies, and performing data analysis.

More information about AP Physics 2 can be found on the College Board website: <https://apstudent.collegeboard.org/apcourse/ap-physics-2>.

As with all AP classes, students can expect a significantly increased workload in AP Physics II. If you are considering registering for AP Physics 2, it is highly recommended that you have a conversation with your science teacher and the Science Department Chair (Dr. Eisen).

World Languages

Hebrew

Ulpan Or's iHebrew interactive curriculum has been designed for students to gain significant conversational skills in the language. Utilizing a web based platform coupled with teacher guided classroom experiences, the program supports beginners up to very advanced Hebrew speakers. It is based on unique second language acquisition approach.

Hebrew 1

Novice: Reading and writing acquisition. Level Curriculum: Acquaintance: related verbs. Basic Conversation and feelings. Numbers 1-19. Food. Directions.

Hebrew 2

Novice: Numbers up to 100, ages, Acquaintance- enhanced, Feelings and emotions, Nouns and Adjectives related to a visit to Israel.

Novice-mid: Acquaintance in Hebrew, In-depth Acquaintance in Hebrew, Nouns - In school and at work, Nouns - In the family

Hebrew 3

Novice-Mid: Numbers and belongings, Adjectives, Body parts, Colors, Family situation, Food and shopping in the market, Numbers and money (Texts from The Mahane Yehuda market, Meals and Kitchen, Directions, Places, Home, Apartment

Hebrew 4

Novice-Mid: Novice High: Places, home, apartment, On the plane part #1: Basic Acquaintance, On the plane part #2: continuing basic acquaintance, In the Family part #1: Family life, In the family part #2: more of family life, Food - part #1

Hebrew 5 Honors

Novice High - Intermediate-low: Food- part 2, At home - part 1, At home part 2, On the phone part 1, on the phone part 2, Daniel and Shira - Meeting people in Israel, Daniel and Shira: conversing about Israel, Daniel and the family: family in Israel

Hebrew 6 Honors

Intermediate-Low: Daniel and Shira; meeting people in Israel, Daniel and Shira: Conversing about Israelis, Daniel and the family: family in Israel, Breakfast: eating breakfast with an Israeli family, Tamar searches for an Apartment, Homes and Apartments in Israel, In the restaurant: eating out in Israel, At the Supermarket: shopping for food in Israel, At the Market: Touring the Israeli market.

Hebrew 7 Honors

Intermediate Low - Inter Mid: Clothes: getting dressed and buying clothes in Israel, Weather, Dad and I are friends on Facebook: emotions and Facebook, Closed and open Doors: emotions at home, A bad report card: Dealing with grades, Orna disrupts the class: Situation in the class, Dad's Blackberry: relationship with the parents.

Hebrew 8 Honors

Intermediate Mid - Inter. High: Difficulty with Homework: Relationship with The kids, Getting along during the family vacation, Brother Jealousy over Bar- Mitzvah: sibling rivalry, Sister jealousy: Sibling rivalry, This is my computer Too: Siblings feuds. Israelis: Israeli traits, British: British traits, Italian: Italian Traits, The Swiss: Swiss traits.

Hebrew 9 Honors

Intermediate High: The Americans: American traits, The Alternative Child: Children's Traits, The Class Clown: children Traits, The class Queen: Children Traits, The Class Genius: Children Traits, People: a T.V. series.

Online World Languages

Online learning programs have enabled expanded opportunities for World Language study in:

Arabic
Chinese
French
German
Japanese
Korean
Latin
Russian
Sign Language

Full course descriptions are available at:

- [Fuel Education](#)
- [BYU World Languages](#)

Students who are best positioned for success in online programs of study are confident in their ability to work independently and to keep pace through a curriculum without extensive, daily, outside monitoring of their progress. Additionally, this type of learning environment is most appropriate for those who consider themselves adventurous learners, ready to take on educational challenge in a way that's quite different from other ways they've encountered material before.

Spanish

Spanish 1

Spanish 1 is a beginning Spanish course. In this course, students will begin to master the skills of listening, reading, writing, and speaking. Students will develop an understanding and knowledge of grammatical structures, build vocabulary, and begin writing as well as developing oral and auditory proficiency through the use of storytelling. The course work incorporates cultural literacy and appreciation of Spanish and Spanish-speaking cultures.

Spanish 2

Spanish 2 reviews some skills from Spanish 1 and introduces new skills in the areas of auditory comprehension, vocabulary development, reading comprehension, writing and speaking output, and cross-cultural competence. Writing and speaking skills are emphasized in class through the continued use of reading and storytelling. Students will continue to expand their knowledge of Spanish speaking cultures in the Americas and Spain.

Spanish 3

Spanish 3 continues the development of all Spanish 1 and 2 skills. In this level, students review and learn new grammar, verb tenses, and continue to develop oral and written communication skills. Considerable emphasis is placed upon an expanded Spanish vocabulary, fluency of speech, and accuracy of writing. Students will continue to develop an understanding and appreciation for the Hispanic culture by means of selected readings, projects, and authentic movies and videos from throughout the Spanish speaking world.

Spanish 4

Spanish 4 is an upper-intermediate course which will further develop skills in grammar, writing, speaking and listening through the continued study of the language, literature and culture of Spain, Latin America and Hispanic communities in the United States. The course is conducted almost exclusively in Spanish. It also seeks to improve students' ability to read and appreciate literary and non-literary texts in Spanish, deepening students' awareness and understanding of the cultural diversity of the Spanish-speaking world.

AP World Language Courses

AP Spanish Language

The AP Spanish Language and Culture course is equivalent to an upper-intermediate college level Spanish course and it is conducted exclusively in Spanish. This is a rigorous course which provides students opportunities to develop language proficiency across the three modes of communication: Interpretive, Interpersonal, and Presentational in real-life situations. Unit goals are stated in the form of Essential Questions relating to the six AP themes in which this course is based. Students are regularly assessed and constantly receive formative feedback to refine communication skills. Students will think critically about culture, literature, science, art, etc, through the use of authentic materials that are representative of the Spanish-speaking world. It is highly recommended that you have a conversation with your current Spanish teacher.

More information about AP Spanish Language and Culture may be found on the College Board website: <https://apstudent.collegeboard.org/apcourse/ap-spanish-language>

AP COURSE OFFERINGS
(Subject to Change)

	2019-2020	2020-2021	2021-2022	2022-2023
AP Biology	Yes	No	Yes	No
AP Chemistry	No	Yes	No	Yes
AP Physics 1	Yes	Yes	Yes	Yes
AP Physics 2	Yes	No	Yes	No
AP Environmental Science	Yes	No	Yes	No
AP Psychology	Yes	No	Yes	No
AP Music Theory	No	Yes	No	Yes
AP Studio Art 2D Design	Yes	Yes	Yes	Yes
AP US History	Yes	Yes	Yes	Yes
AP European History	Yes	No	Yes	No

AP Art History	No	Yes	No	Yes
AP Comparative Government and Politics	No	Yes	No	Yes
AP US Government	Yes	No	Yes	No
AP Literature	Yes	Yes	Yes	Yes
AP Language and Composition	Yes	Yes	Yes	Yes
AP Macroeconomics	Yes	No	Yes	No
AP Statistics	Yes	Yes	TBD	TBD
AP Calculus AB	Yes	Yes	TBD	TBD
AP Calculus BC	Yes	Yes	TBD	TBD
AP Computer Science Principles	Yes	Yes	TBD	TBD
AP Computer Science A	Yes	Yes	TBD	TBD
AP Spanish Language and Culture	Yes	Yes	Yes	Yes
Total	15	13	13	9