

Science

SCHS Science Course Descriptions

Biology (required for all freshmen)	A year-long, lab course that integrates biological & earth science concepts to investigate real-world phenomena. Through student-centered inquiry & critical thinking, students build scientific literacy while exploring everything from cellular growth to the global impacts of climate change
Chemistry (Honors)	Pre-requisite laboratory course integrating foundational chemistry w/ earth science, focusing on chemical processes that drive the Earth system & the application of NGSS Science and Engineering Practices
AP Biology	College-level curriculum focusing on intensive biological theory for topics ranging from cells to genes and ecology, with a heavy emphasis on technical scientific writing and preparation for the AP exam
AP Chemistry	Rigorous AP course for science majors covering all standard university-level topics & laboratory experiments required for science-degree pathways
AP Physics 1	Algebra-based study of Newtonian kinematics, rotational motion, waves; requires knowledge of algebra, geometry, & trigonometry for complex problem-solving
AP Environmental Science	Interdisciplinary study involving geology, biology, & chemistry to analyze natural & human-made environmental problems, assess associated risks, & develop preventative solutions
Human Physiology Honors	In-depth study of human anatomy and body systems that requires vertebrate dissection, time-intensive lab work, a comprehensive final project, and a high-level conceptual understanding of structure and function
Intro to Biotech	Dual-enrollment course (Ohlone College) teaching sterile laboratory operating procedures, safety protocols, and foundational biotech concepts as a prerequisite for Advanced Biotechnology
Marine Biology	Lab-based course covering oceanography, classification of marine life, the mechanics of waves & currents, & the ecology of zones ranging from estuaries and coral reefs to the mesopelagic
Physics	Mathematical study of forces, motion, energy, light, and electromagnetism; requires proficiency in manipulating algebraic equations, scientific notation, dimensional analysis, & experimental design

Engineering

SCHS Engineering Course Descriptions

AP Physics 1	Algebra-based study of Newtonian kinematics, rotational motion, waves; requires knowledge of algebra, geometry, & trigonometry for complex problem-solving
Intro to Biotech (advanced after completion)	Dual-enrollment course (Ohlone College) teaching sterile laboratory operating procedures, safety protocols, and foundational biotech concepts as a prerequisite for Advanced Biotechnology
AP Calc AB	A college-level study of coordinate geometry and functions focusing on the calculation of limits, continuity, derivatives, and definite integrals for algebraic, trigonometric, and exponential functions
AP Calc BC	Advanced second-year calculus course that builds on AB topics to include complex integration techniques, sequences, & series, preparing students for the BC-level AP exam
Statistics	Course covering data analysis, data production, probability, and inference, with applications in medicine, science, business, & consumerism
AP Statistics	Rigorous data science course involving computer-based analysis, probability simulations, and classroom experiments to prepare students for college-level statistics requirements across various majors
AP Computer Science Principles	Introductory course exploring the foundational creative aspects of programming, including abstractions, algorithms, large data sets, cybersecurity, & global impact of the Internet
AP Computer Science A	First-semester college-equivalent course focusing on object-oriented programming in Java, emphasizing data structures, algorithmic design, & the ethical implications of computing
Construction	Project-based dual-enrollment course w/ San Jose City College covering tool identification, orthographic drawing, power tool safety, and cabinetry techniques like face-frame and joint construction

Math

SCHS Math Course Descriptions

Algebra 1	Foundational course emphasizing real numbers, solving linear equations and inequalities, systems of equations, polynomial factoring, and the study of irrational numbers and radicals
Algebra 2	Extension of algebraic concepts focusing on quadratic and exponential functions, logarithms, complex numbers, conic sections, rational expressions, and introductory probability and progressions
Geometry	Study of 2- and 3-dimensional properties of points, lines, planes, & circles, w/ a heavy emphasis on logical reasoning & the construction of formal geometric proofs
Precalculus & Trigonometry (H)	Comprehensive review of Algebra 2 and Geometry that introduces circular functions via the unit circle, vector algebra, analytical geometry, and the study of elementary polynomial and logarithmic functions (take Honors if seeking accelerated GPA-boost, an accelerated pace, and have a desire to complete AP Calculus during high school)
Algebra 2 / PreCalc Honors	Accelerated, GPA-weighted course covering the full curricula of both Algebra 2 & Precalculus, including periodic and circular functions, vector and parametric equations, and complex trigonometry
Calculus	College-preparatory course focusing on analytic geometry, limit theory, derivatives, and integrals to provide students with a functional background for university-level calculus
AP Calculus AB	A college-level study of coordinate geometry and functions focusing on the calculation of limits, continuity, derivatives, and definite integrals for algebraic, trigonometric, and exponential functions
AP Calculus BC	Advanced second-year calculus course that builds on AB topics to include complex integration techniques, sequences, & series, preparing students for the BC-level AP exam
Statistics	Course covering data analysis, data production, probability, and inference, with applications in medicine, science, business, & consumerism
AP Statistics	Rigorous data science course involving computer-based analysis, probability simulations, and classroom experiments to prepare students for college-level statistics requirements across various majors
Data Science	Project-based course where students explore sampling, correlation vs causation, bias & uncertainty, & the construction of data-based arguments and models.

Tech

SCHS Tech Course Descriptions

Exploring Computer Science	A year-long course that explores the foundations of computer science in a project-based learning environment. Topics range from History of Computing, Binary Concepts, Foundations of Programming, Application Development with MIT App Inventor, Robotics platforms: Lego Mindstorm, Introduction to Python and Introduction to HTML Web Design.
IT Essentials	IT Essentials covers computer fundamentals and shares the career skills needed for entry-level IT jobs, while working with advanced simulation tools and having multiple hands-on labs.
Cybersecurity	This course introduces the concepts of cybersecurity, why it is important, and some of the products and processes used to secure data. This course aims to increase awareness about the global need for cybersecurity and the advancements in this industry.
Data Science	Project-based course where students explore sampling, correlation vs causation, bias & uncertainty, & the construction of data-based arguments and models.
AP Computer Science Principles	Introductory course exploring the foundational creative aspects of programming, including abstractions, algorithms, large data sets, cybersecurity, & global impact of the Internet
AP Computer Science A (need pre-req of AP CSP)	First-semester college-equivalent course focusing on object-oriented programming in Java, emphasizing data structures, algorithmic design, & the ethical implications of computing
Digital Media	This course focuses on electronic image manipulation and page layout, specifically the principles of design, the fundamentals of the design process, and visual communication theory. Students will design and create a variety of real-life projects.
Computer Graphic Design	In the first semester, students will work individually and in small groups to complete projects with traditional artistic concepts with elements of graphic design. The second semester will focus on a website design with students creating digital images to incorporate into web pages.
ROP Video Production	A year-long course covering the foundations of video production: developing an idea or story, pre-production planning, video photography, lighting, and basic sound, and digital post-production. Students will also learn to evaluate film and videos and copyright laws.
Intro to Biotechnology	Dual-enrollment course (Ohlone College) teaching sterile laboratory operating procedures, safety protocols, and foundational biotech concepts as a prerequisite for Advanced

	Biotechnology
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Art

SCHS Art Course Descriptions

Intro to Art	A basic art class that helps students develop skills in drawing, painting, color theory and composition, and 2 & 3 dimensional design. This course covers skills necessary for painting, drawing, crafts, the elements of design, and art history.
Ceramics	Students will learn the three basic hand-building techniques of pinch, coil, and slab construction. The artwork will be decorated and glazed with a variety of materials and techniques.
Photography	Students will focus on composing great photos, using digital cameras, and mastering Adobe Photoshop. Students will also study aesthetic principles for assessing and creating high-quality images through hands-on practice via Adobe softwares
Painting	Painting will provide more advanced instruction in painting and composition. Students will apply these skills while exploring a variety of art styles that relate to art history and studio application.
AP Drawing	The course addresses the development of the artist's voice through technique, subject matter, and style as well as the ability to articulate that through writing. A portfolio of the student's work is created throughout the year and submitted to CollegeBoard for scoring.
AP 3D Art and Design	AP 3D Art and Design addresses the development of the artist's voice through technique, subject matter, and style as well as the ability to articulate that through writing. A portfolio of the student's work is created throughout the year and submitted to CollegeBoard for scoring.
AP 2D Art and Design	AP 2D Art and Design addresses the development of the artist's voice through technique, subject matter, and style as well as the ability to articulate that through writing. A portfolio of the student's work is created throughout the year and submitted to CollegeBoard for scoring.
Digital Media	This course focuses on electronic image manipulation and page layout, specifically the principles of design, the fundamentals of the design process, and visual communication theory. Students will design and create a variety of real-life projects.
Computer Graphic Design	In the first semester, students will work individually and in small groups to complete projects with traditional artistic concepts with elements of graphic design. The second semester will focus on a website design with students creating digital images to incorporate into web pages.
Yearbook	Students learn desktop publishing techniques with text and

	photos as they write, edit layout pages, and proofread, in order to create the school yearbook. Other skills include marketing, distributing, budgeting, and seeking advertising to offset production costs.
Journalism	While managing all aspects of publishing a print newspaper and online news site, students will acquire skills in researching, reporting, interviewing, writing and revising. They will practice writing in various journalistic genres, from news stories to features, with an emphasis on meeting professional journalistic standards for quality, accuracy, and balance.
ROP Video Production	A year-long course covering the foundations of video production: developing an idea or story, pre-production planning, video photography, lighting, and basic sound, and digital post-production. Students will also learn to evaluate film and videos and copyright laws.
Culinary Arts 1 (2 after completion)	This course, suitable for beginning cooks and those with some experience, provides an overview of culinary tools and techniques through preparation of a variety of recipes ranging from cinnamon rolls to sushi, from popovers to pizza. The course covers culinary vocabulary and mathematics, kitchen safety, and sanitation.
Theatre 1	An introductory drama course which covers the basic techniques of mime, improvisation, character development, stage movement, memorization, and voice. Students will be asked to write and perform simple scenes, scripts, and critical reviews of films and live theatrical performances.
Theatre 2	An advanced project and performance based class where students will explore elements of theatrical productions including advanced acting methods and character development, script analysis, scriptwriting, directing, theatre history and theatrical design.
Theatre Production Honors	The work of this course is primarily completed through practical application and implementation of theory, design and research. Students will focus on building a solid foundation for acting with a focus on breath, voice and movement. Students will explore theater through improvisation, scene work and the performance of both a play and musical for the public.