

VAIL HIGH SCHOOL COURSES

The Vail High School curriculum is designed to provide students with challenging college preparatory experiences in a nurturing and supportive environment. Our goal is to inspire students to take a minimum of six courses each year. The VHS curriculum is designed to prepare each student for a rigorous college experience and to provide opportunities for college level work and college credit. Course offerings are subject to change based on course enrollment.

COURSE DESCRIPTIONS

ENGLISH

Vail High School requires four credits for graduation. Students will utilize the writing process and 6 traits of writing in preparation for successful communication and the AIMS test.

English 1

Grade 9

One Credit

English 1 focuses on the development of high school level reading comprehension and writing skills. Organizational study and research skills are reviewed and emphasized. Students are exposed to a variety of genres and they are assigned a variety of writing activities, which include: essays, narratives, literary analyses, poems, etc.

English 2

Grade 10

One Credit

This literature class focuses on American literature from Pre-Colonial to Modern Times. Students will analyze a variety of genres through persuasive essays, journals, creative writing, and oral presentations. Students will examine how the American Identity has changed over time.

English 3

Grade 11

One Credit

Students in this class will read fiction, poetry, plays, autobiography and biography from works published after 1900. The various genres will be read for details of the era, i.e., life style, work ethics, fads, cultural phenomena, and natural ideals. Each student is required to create and present at least one PowerPoint project on an author and his or her works. Several literary analyses will be assigned throughout the year. In addition presentations and research papers will be required.

English 4

Grade 12

One Credit

This Senior English class is designed to help students continue to gain understanding of the development, structure, and function of the English language through the study of world literature. Novels, plays, short stories, essays and poetry provide opportunities for expanding reading, writing, research, and problem solving strategies. Critical analysis of literature serves as the basis for written assignments. A research project prepares students for the transition to higher education and the world of work.

Honors English

Grades 9-12

One Credit

This is an honors-level course open to all grade levels who have demonstrated high academic achievement and a desire to challenge themselves. Students will read a variety of literature from both American and World Literature strands. In addition, students will write in a wide variety of formats and genres and will practice speaking and debating.

Writing 101 and 102*Grades 11-12*

Three college credit Hours

Taught as a Pima College dual enrollment class, these college-level classes help prepare the student for the next level. Students must be able to place into college-level classes in Math, Reading, and Writing in order to take this class.

AP English*Grades 11-12*

One Credit

This class prepares students to take the College Board's Advanced Placement test in Literature and Composition. It focuses on close reading and intensive study of respected literature from various genres and periods. Emphasis will be placed on gaining a deeper understanding of the ways writers use language, structure, style and themes to provide meaning for their readers. Students will learn how to draw inferences and conclusions about the meaning and value of a given work. Writing will involve literary analysis, narrative, expository and creative assignments.

MATHEMATICS

Three years of math are currently needed to meet high school graduation requirements for classes 2010-2012. The class of 2013 is required to have four years of math. Vail High School requires the following three credits of math: Algebra I, Geometry, Algebra II. It is highly recommended that all students take four years of math if they plan on attending any postsecondary educational institution. (Arizona state universities require a 4th year beyond Algebra II).

Algebra I*Grade 9*

One Credit

Students will use algebraic methods to explore, model, and describe patterns, relationships, and functions involving numbers, shapes, data, and graphs within a variety of real world problem-solving situations. Students will also apply knowledge and understanding of number sense, data analysis, probability, structure, logic, and geometric principles.

Geometry*Grades 9-10*

One Credit

Geometry is a Math course that explores spatial relationships in Mathematics. The course also provides an introduction to mathematical logic and proof. Calculators are not permitted in this course. Students' grades will come from projects, homework, formative quizzes, benchmark tests and exams.

Honors Geometry*Grades 9-10*

One Credit

Honors Geometry focuses on all of the topics covered in Geometry with an emphasis on reasoning and proofs. Calculators are not permitted in this course. The bulk of the students' grades will come from formative quizzes, benchmark tests, project work and exams.

Algebra II*Grades 10-11*

One Credit

This course extends the concepts learned in previous Algebra courses. Topics include fractional and negative exponents, quadratic equations, and problem solving related to other sciences, as well as an introduction to concepts of geometry and trigonometry.

Trigonometry*Grades 11-12*

One Credit

Trigonometry encompasses a quarter each of a review of algebra II, trigonometry, analytic trigonometry, and advanced algebra. Students will review important concepts as well as prepare themselves for college algebra or pre-calculus. The purchase of a graphing calculator is highly recommended, but at least a scientific calculator is required.

Pre-Calculus*Grades 11-12*

One Credit

Pre-Calculus is a rigorous, college-preparatory course. Students will gain mastery in the following topics: trigonometry, analytical geometry, and advanced algebra. The purchase of a graphing calculator is highly recommended, but at least a scientific calculator is required. The bulk of the student's grade comes from exams and quizzes.

Calculus*Grade 12*

One Credit

A.P. Calculus is the study of how quantities and rates are related. Such as how a position and a velocity are related or, a velocity and an acceleration are related. Everyone knows that when the accelerator in a car is stepped on the car accelerates and the result is that the velocity has changed. There is a relation between the two and calculus is the tool we use to describe it. Calculus is also used to study optimization, volume, work, force, pressure, and probability.

SCIENCE

To meet Vail High School Science graduation requirements, a student must successfully complete three credits. This must include Physics 1, Biology, and a Chemistry class. It is highly recommended that all students take four years of science if they plan on attending any postsecondary educational institution. Vail High School encourages all science students to participate in the S.A.R.S.E.F. Science Fair.

Integrated Science- Physics 1*Grade 9*

One Credit

This Integrated Science Course with an emphasis on Physics, is required for all freshman as a preparation for further scientific study. This course seeks to familiarize the students with the basic laws and forces that govern all physical events in the world around them. The course uses class and laboratory experience to aid discovery, inspire curiosity, and aid understanding of the basic principles of physics. Students will use inductive and deductive reasoning along with cause and effect relationships to solve problems. This course involves mathematics at the algebra level, using calculators and graphing work. Students in this course will gain experience learning and following a scientific method that will provide a way of thinking that will be useful in almost all future studies. Emphasis is placed on conceptual physics: study of forces, laws of motion, energy, simple machine function; and basic chemistry: study of the periodic table, atomic structure, molecular bonding and classification of matter.

Integrated Science - Physics 1 Honors*Grade 9*

One Credit

This Integrated Science course with an emphasis on Physics, is an option for freshman as a preparation for further scientific study. This course seeks to familiarize students with the basic laws and forces that govern all physical events in the world around them. The course uses class, laboratory experience, and experimental research to aid discovery, inspire curiosity, and deepen student's understanding of the rules that govern the

universe. Students will use inductive and deductive reasoning along with cause and effect relationships to solve real-world problems. This course involves mathematics at the algebra level, using calculators and graphing work. Students will gain experience learning and following a scientific method that will provide a way of critical thinking that will be useful in all future studies. Emphasis is placed on conceptual physics: study of forces, laws of motion, energy, simple machine function; basic chemistry: study of the periodic table, atom structure, molecular bonding and classification of matter.

Biology

Grade 9-10

One Credit

This course is split into two parts. The first semester we cover microbiology. The first quarter covers cell biology including biochemistry, cell theory, cell division, reproduction and photosynthesis and cellular respiration. The second quarter covers the molecular basis for heredity including genetics, DNA, RNA, replication, transcription and translation. The second semester covers macro biology. In the third quarter, we cover evolution by natural selection and how populations adapt and grow. In the second quarter we cover the different kingdoms of life and show how they compare anatomically.

Honors Biology

Grade 10

One Credit

Students will cover the same topics studied in Biology; however, the students will be required to go into more depth by writing a three to five page research paper each quarter and participating in the science fair.

Chemistry

Grades 11-12

One Credit

This course is a laboratory-based class designed to prepare students for advanced study in science. Students will examine matter, its composition, and properties, and how it affects everyday life. The laboratory activities contain an environmental focus while instructing students about chemistry issues in society. A science fair project is required for juniors.

Honors Chemistry

Grades 11-12

One Credit

Students will cover the same topics studied in Chemistry; however topics will be studied in greater depth.

Conceptual Physics

Grades 11-12

One Credit

This course is designed to build a conceptual understanding of the physical laws and natural processes needed to appreciate how the science of physics is involved in everyday experiences. Topics include: motion, forces, energy, properties of matter, sound, light electricity, magnetism, and atomic and nuclear physics with applications to environmental and social studies. This is a laboratory class with hands on labs each week; a science fair project required for juniors.

High School Physics

Grades 11-12

One Credit

Provides a comprehensive course in general physics. Studies major concepts including motion, mechanics, law of gravitation, laws of work, thermodynamics, wave mechanics, electricity, and quantum mechanics. Labs reinforce the concepts previously stated. This is a laboratory class with hands on labs each week; a science fair project is required for juniors.

HEALTH

Vail High School requires half credit of health for graduation.

Health/Wellness

Grade 10

Half Credit

Health and Wellness is designed as a sophomore level, half credit, and required course. The focus of this is to lay a solid foundation for life-long, healthy decision-making, based on the District ACT statement. Students will be given the opportunity to practice skills that should help them make good choices, choices which will promote caring, responsibility and a respect for family values, others and self. This course will also focus on human development, sex education and the avoidance of high-risk behaviors. Although the course will be comprehensive, emphasis will be placed on sexual abstinence. Guest speakers, role-playing and videos will be utilized throughout the course.

SOCIAL STUDIES

Vail High School requires the following three credits of social studies for graduation: one World History, one U.S./Arizona History and one year of Government.

World History

Grade 9

One Credit

In this course, students will study the history of the world's great civilizations, their geographic settings, political development, social life and economic conditions. In this course students will study the relationship of the present to the past.

Honors World History

Grade 9

One Credit

Students will cover the same topics studied in World History; however topics will be studied in greater depth.

U.S. & AZ History

Grade 11

One Credit

This course content includes a survey of the political, economic, and social history of the American people from the founding of colonial Jamestown in 1607 to world leadership in the present decade. This course also covers the State of Arizona's Role in US History.

AP United States History

Grade 11-12

One Credit

United States History, as an Advanced Placement course provides a college-level, discipline-based curriculum. Course content includes a survey of the political, economic, and social history of the American people from the founding of colonial Jamestown in 1607 to world leadership in the present decade.

Government

Grades 12

One Credit

This course studies early American concepts of political science as a basis for understanding today's government. It also compares modern political and economic structures, provides in-depth treatment of constitutional rights, as well as the election process and the Legislative, Executive, and Judicial branches of the government at the federal, state and local levels. Finally it explores the impact of current affairs in these areas. This course requires research work.

CAREER AND TECHNOLOGY EDUCATION (CTE)

To meet Vail High School graduation requirements, a student must successfully complete two credits of Career and Technical Education.

BUSINESS PROGRAM

Business Management 1

Grades 9-10

One Credit

The goal of this course is to introduce students to the world of business. They will explore a variety of occupational areas, demonstrate career planning skills and learn about proper communication skills for public and workplace environments. They will develop leadership and teamwork skills necessary for the workplace, learn decision making and develop critical thinking skills in order to analyze how social, organizational and technological systems operate. This basic course is the beginning step in developing all of the competencies necessary to complete the rest of the business courses offered at Vail High School.

Business Management 2

Grade 10-11

One Credit

The goal of this course is to prepare individuals for careers in current or emerging employment sectors. Students will prepare for a career in business developing self-confidence, positive work attitudes, and general employment skills, while expanding their knowledge of basic business concepts and procedures. Virtual workplace simulations create a challenging and fun interactive workplace experience that will give students a chance to apply their academic and soft skills in a real world setting. Students will have the option of participating in FBLA activities. (Prerequisite Course-Business 1)

Business Management 3

Grade 11-12

One Credit

This course expands upon the skills and activities learned in Business Management 1 while participating in a supervised business training program. Students will earn two elective credits, one for the class and another for the paid work experience. Students will participate in FBLA activities and attend both local and state FBLA competitive conferences. (Prerequisites: Teacher recommendation and Business Management 2.) This course is eligible Pima Community College concurrent enrollment.

INFORMATION TECHNOLOGY PROGRAM (CTE)

Information Technology (Prerequisite Course)

Grade 9-11

One Credit

This course is designed to introduce students to Information Technology careers and is a prerequisite to Web Design, Computer Maintenance, and Programming (2-year CTE program in Information Technology). Students will expand their understanding of basic computer programs to include learning more advanced IT applications for web design, GIS/GPS, gaming, and photo/graphics editing. Open source and purchased software will be used on Windows and MacOS. Students will also study computer topics in hardware, software, and networking. SkillsUSA competition will be available to students after school. PIMA Community College articulation credit is available concurrently with this class (CIS 100), A/B grade required.

Web Design*Grades 11-12*

One Credit

In Web Design students learn to create multi-media web sites using HTML, CSS, JavaScript, video, and animation technologies. Design and programming of web site projects will be included. Adobe Dreamweaver, Flash, Fireworks, Mac iLife, and open source software will be used extensively within this class to build multimedia web sites. Web programming languages will be used. Professional careers in Web programming and design will be researched. Students can compete within SkillsUSA web design competitions. PIMA Community College Dual credit is available concurrently with this class (CIS 121), A/B grade required. (Prerequisite: Information Technology)

ENGINEERING PROGRAM (CTE)**Engineering Technology and Design 1***Grades 9-12*

One Credit

Vail High School will be offering a JTED-funded Engineering program focusing on various fields of engineering. This 3-year program will introduce state-of-the-art technologies seldom found within a high school curriculum. Guidance from industry will insure this curriculum is focused on 21st century skills required for modern engineering. These courses (level 1, 2, and 3) will include a mixture of computer-based product design skills, engineering academics, and hands-on project completion. Technology that will be utilized over the 3 year program includes but is not limited to: Bridge Design Software, GIS and GPS technology, AutoCAD, Solidworks, use of a wind tunnel to review solid model designs, as well as virtual and hands on electronics labs. This first year will focus on learning the general concepts and fields of engineering and transition into an electronics course that is intended to articulate with Pima Community College's TEC 100 and possibly TEC 104. In addition students will participate in SkillsUSA, a career and technical organization dedicated to providing professional development for students through competitions, seminars and in class training.

Engineering Technology and Design 2*Grades 10-12*

One Credit

Vail High School will be offering a JTED-funded Engineering program focusing on various fields of engineering. This 3-year program will introduce state-of-the-art technologies seldom found within a high school curriculum. Guidance from industry will insure this curriculum is focused on 21st century skills required for modern engineering. These courses (level 1, 2, and 3) will include a mixture of computer-based product design skills, engineering academics, and hands-on project completion. Technology that will be utilized over the 3 year program includes but is not limited to: Bridge Design Software, GIS and GPS technology, AutoCAD, Solidworks, a wind tunnel analyzer, a material strength tester, as well as virtual and hands on electronics labs. The second year students have the opportunity to learn professional standards and expectations as well as engineering technology and principles. A large portion of the class will be dedicated to learning introductory AutoCAD, and the course will articulate with Pima Community College's CAD 100. In addition students will participate in SkillsUSA, a career and technical organization dedicated to providing professional development for students through competitions, seminars and in class training.

Engineering Technology and Design 3*Grades 11-12*

One Credit

Vail High School will be offering a JTED-funded Engineering program focusing on various fields of engineering. This 3-year program will introduce state-of-the-art technologies seldom found within a high school curriculum. Guidance from industry will insure this curriculum is focused on 21st century skills required for modern engineering. These courses (level 1, 2, and 3) will include a mixture of computer-based product design skills, engineering academics, and hands-on project completion. Technology that will be utilized over the 3 year program includes but is not limited to: Bridge Design Software, GIS and GPS technology, AutoCAD, Solidworks, a wind tunnel analyzer, a material strength tester, as well as virtual and hands on electronics labs.

Third year students will be utilizing Solidworks software to design and build small composite models. They will also have the opportunity to build model airplanes, model rockets and other model vehicles. There will be an independent study project which will allow and encourage the student to bring their personal knowledge to task to design and build a project of choice. And finally a flying simulators for private pilot ground school completion will be available to these students. This class is intended to articulate with Pima Community College's CAD 151 (SolidWorks). Students will continue to participate in SkillsUSA, a career and technical organization dedicated to providing professional development for students through competitions, seminars and in class training

MODERN LANGUAGES

Students planning to go to college must complete two years of a Modern Language.

Spanish I*Grades 9-11*

One Credit

This class is for non-native speakers who want to learn the Spanish language. Students will develop primary listening and speaking skills, which stress the correct pronunciation and intonation of the Spanish language. Students will practice Spanish by oral practice, repeating gestures, telling stories, activities, songs, vocabulary games, specific grammar structure, and projects. Students will learn the differences and similarities of the Spanish speaking countries. Students will use appropriate Spanish material to assist them through the four basic communications skills (listening, reading, speaking, and writing).

Spanish II*Grades 10-12*

One Credit

Students will improve and expand their listening, reading, speaking and writing skills. Students will practice Spanish by oral communication, repeating gestures, creating Spanish stories, performing short drama skits, reading Spanish novels, singing Spanish songs, playing vocabulary games, learning specific complex grammar structures, and completing projects. Students will also continue to learn cultural similarities and differences of the Spanish-speaking world.

FINE ARTS

Students must complete one year of Fine Arts.

Intro to Art

Grades 9-12

One Credit

This course is designed for students who wish to refine their artistic skills in drawing, painting, design, and sculpture. Students will be taught artistic techniques through the use of professional artist's materials. In addition to the studio experience, students will have an opportunity to expand their comprehension of art concepts, artistic techniques, and art media through a study of art historical themes and journal entries.

OTHER ELECTIVES

Film Analysis

Grades 9-12

One Credit

The Film Literature views films that are of literary merit and have all the literary elements found in classic novels. The students analyze films and they also reflect on the human experience based on issues presented in each film. The class is broken down by thematic units. Some thematic units represented are family issues, the meaning of friendship, rite of passage (coming of age), acceptance, and universal themes. Aside from "reading" films, the class requires frequent analysis papers, textbook theory, movie reviews, and regular analysis questions. Discussion is a major part of this class.

Novel Writing

Grades 9-12

.50 Credit

In this class students will learn the fundamentals of character development, setting and plot before participating in National Novel Writing Month. If they are successful in achieving their writing goals for the month they will have their novels published and receive a free proof copy.

Literature in Context

Grades 9-12

.50 Credit

In this class we will study the major events and conflicts of the last 60 years in America and how these issues affected popular culture. We will focus specifically on detective novels and movies and how the crimes that are solved often exemplify the fears of the day, and the hero's of the novels represent the ideals of times.

Introduction to Philosophy

Grades 9-12

One Credit

This course introduces the student to the major philosophers and schools of thought that have influenced the world. Including the cultural and the historical framework in which they originated. The class will analyze the validity and relevance of various philosophies to modern society and its issues. The culmination of the class will involve the formulation of a personal philosophy on various issues along with the creation of a personal portfolio.

Newspaper/Yearbook

Grades 9-12

One Credit

Students in this class will publish a school newspaper that reflects our school community. They will be responsible for planning, organizing, designing the newspaper. Students are also responsible for adhering to journalistic writing standards, editing their work and photography. They will be exposed to a variety of programs to produce a

quality publication. Students in the yearbook portion of the class will create a yearbook that reflects the pictorial history of activities for the present school year. Student will develop a theme, design cover, design and depict events and use a variety of programs.

Psychology

Grades 9-12

One Credit

Upon the successful completion of this course, students will be able to identify major contributors of psychology, explain basic methods of psychological research, apply major theories and stages of development (from infancy through adulthood) to their own lives, as well as those around them and summarize the major causes, symptoms, treatment, and prognoses of various psychological disorders.

Drama

Grades 9-12

One Credit

This is an introductory course in theatre. Students will be given background in stage movement, voice, acting, scene work and some technical areas.

The intention is to provide a basis for theatre as whole and is not just an acting class. It is an academically based introduction to theatre, which briefly covers all areas including history, acting, and technical areas.

Physical Education

Grades 9-12

One Credit

This course is designed to continue to give students the opportunity to gain personal fitness skills and knowledge through an enriched Physical Education program. Students will be empowered to make choices, meet challenges and develop positive behaviors in fitness, wellness and movement activity for a lifetime. Emphasis is placed on students learning personal fitness, including health-related fitness and wellness concepts, self-assessments, and activities. Units of instruction include: Fitness and Wellness; Learning Self-Management Skills; Lifestyle Physical Activity and Positive Attitudes; Components of Health Related Fitness; Choosing Nutritious Foods; Making Consumer Choices; Stress Management; and Personal Program Planning.

Educational Applications

Grades 9-10

One Credit

The goal of Educational Applications is to learn to use a variety of study skill strategies and organizational techniques to complete assignments, to improve grades, and to support students in making progress towards achieving their IEP goals. The class is geared towards helping special education students in 9th grade make a smooth transition to high school. Students learn to calendar their assignments, to communicate with their teachers, to use PowerSchool and MOODLE effectively, and to make action plans for time management and work completion. The class also focuses on creating transition plans and developing goals for post-high school employment and/or education based on learning-style and interest surveys and on research into careers of interest to students.

Office/Teacher Aid

Grades 11-12

One Credit

Students will assist office staff and teachers in a day-to-day running of the school and classrooms. Prerequisite: Teacher recommendation required.

To report any Title IX concerns please contact the Title IX Coordinators
Dennis Barger, Principal, Vail High School (520) 879-1904
John Carruth, Vail School District (520) 879-2053

To report any concerns regarding Special Education please contact the 504 Coordinator
John Carruth, Vail School District (520) 879-2053