SCIENCE DEPARTMENT

PHYSICAL/EARTH SCIENCE	REQUIRED (X) ELECTIVE ( )	CSU (X) UC (X)*	LAB FEE: None
PREREQUISITES: None			
This course is divided into two sections. Physical Science concentrates on the physical principles governing the world around us, including force and motion of physical objects, electricity and magnetism, optics and chemistry. Earth Science explores aspects of the earth including geology, oceanography, meteorology (the weather) and astronomy. The metric system, study skills and laboratory skills are emphasized throughout the course. *Meets graduation requirement in Physical Science.* *** "P" and "H" levels meet college admission requirements.**			
GRADE: 9	LENGTH: 1 Year		

PHYSICAL/EARTH SCIENCE (Basic)	REQUIRED (X) ELECTIVE ( )	CSU ( ) UC ( )	LAB FEE:
PREREQUISITES: None			
This course is divided into two sections. Physical Science concentrates on the physical principles governing the world around us, including force and motion of physical objects, electricity and magnetism, optics and chemistry. Earth Science explores aspects of the earth including geology, oceanography, meteorology (the weather) and astronomy. The metric system, study skills and laboratory skills are emphasized throughout the course. *Suitable for students with below grade level reading ability.* **Does not meet college admission requirements.**			
GRADE: 10	LENGTH: 1 Year		

BIOLOGY	REQUIRED (X) ELECTIVE ( )	CSU (X) UC (X)*	LAB FEE: None
PREREQUISITES: None			
This course is a survey of the biological sciences. The laboratory-oriented course includes: biological principles, structure and function of cells, genetics, evolution, microorganisms, plants, invertebrates, vertebrates, human biology, and ecology. *Satisfies the graduation requirement in biological science.* *** "P" and "H" levels meet college admission requirements**			
GRADE: 10	LENGTH: 1 Year		

BIOLOGY (Basic)	REQUIRED (X) ELECTIVE ( )	CSU ( ) UC ( )	LAB FEE:
PREREQUISITES: None			
This course is a survey of the biological sciences. The laboratory-oriented course includes: biological principles, structure and function of cells, genetics, evolution, microorganisms, plants, invertebrates, vertebrates, human biology, and ecology.			
GRADE: 10	LENGTH: 1 Year		

BIOLOGY SH	REQUIRED (X) ELECTIVE ( )	CSU ( ) UC ( )	LAB FEE:
PREREQUISITES: None			
This is Biology especially for the limited English-speaking student. The content of the course is the same as the Biology course. *Satisfies the graduation requirement in biological science*			
GRADE: 10	LENGTH: 1 Year		

AP BIOLOGY	REQUIRED ( ) ELECTIVE (X)	CSU (X) UC (X)	LAB FEE: None
PREREQUISITES: Honors Biology, Chemistry, or teacher approval			
The goal of the AP Biology course is to provide a learning environment that enables students to develop a solid understanding of the principle concepts of biology. The course will stress the basic facts and synthesis of these facts into major concepts and themes. The students will be preparing for the AP examination in May. Although not all students will take the exam, all will be exposed to the goals of the AP exam and the expectation will be that all the students will take the exam.			
GRADES: 11, 12	LENGTH: 1 Year		

BIOTECHNIQUES	REQUIRED ( ) ELECTIVE (X)	CSU ( ) UC ( )	LAB FEE: None
PREREQUISITES: Instructor's approval			
Biotechniques is a course that is very unique to any high school campus. The course consists of many "hands-on" activities ranging from simple anatomical drawings to in-depth dissections and bone articulations. We will have the opportunity to enhance our knowledge of the structure and function of various organisms by utilizing prepared specimens. As time permits we may also delve into the essence of life itself, the DNA molecule. With the proper biological technique we can actually extract DNA in the laboratory. This highly organized course is adaptable to any current biological issues we may wish to explore. This is a demanding, rigorous, course that lends itself well to the highly motivated, independent student. **This course may not be offered every year.**			
GRADES: 11, 12	LENGTH: 1 Year		

AEROSCIENCE	REQUIRED ( ) ELECTIVE (X)	CSU ( ) UC ( )	LAB FEE: None
PREREQUISITES: None (Teacher approval required for 2nd semester entry)			
This course is recommended for the average to above average student who has an interest in aviation. The course is taught from a pilot's point of view and includes hands-on flight planning techniques including the use of aerial maps to plot courses and flight computers to determine such things as time, distance and fuel consumption. Students have the opportunity to use a computer flight simulator program to practice take-offs, landings, acrobatics and instrument flight. Aviation topics include: aviation history, principles of flight, instrumentation, acrobatics and formation flying, weather, flight regulation, navigation and communications, flight physiology (how flying affects the body), aviation careers, and the impact aviation has had on society. **This course may not be offered every year.**			
GRADES: 9, 10, 11, 12	LENGTH: 1 Year		

ASTRONOMY I	REQUIRED ( ) ELECTIVE (X)	CSU (X) UC (X)	LAB FEE: None
PREREQUISITES: Algebra I, Physical Science and Earth Science with a grade of C or better			
This course is a quantitative and qualitative study of the principles, processes and laws that govern the Universe. This course includes research. Laboratory and observational activities consistent with modern astronomical research. It is a one-semester course that partially satisfies the University of California "f" requirement for college Preparatory Electives.			
GRADES: 10, 11, 12	LENGTH: 1 Semester		

ASTONOMY II	REQUIRED ( ) ELECTIVE (X)	CSU (X) UC (X)	LAB FEE: None
PREREQUISITES: Astronomy I with a C or better and recommendation of teacher.			
This course is a quantitative and qualitative study of the principles, processes and laws that govern the Universe. This course includes research. Laboratory and observational activities consistent with modern astronomical research. It is a one-semester course that partially satisfies the University of California "f" requirement for college Preparatory Electives.			
GRADES: 10, 11, 12	GRADES: 10, 11, 12		

NATURAL ENVIRONMENT OF SO. CALIFORNIA (NESC)	REQUIRED ( ) ELECTIVE (X)	CSU (X) UC (X)	LAB FEE: None
PREREQUISITES: None			
NESC will provide information on the geology and specific plants and animals of the following unique environments: First semester – 1) Mammoth and the Eastern Sierra Nevada; 2) Joshua Tree National Park; 3) The Mojave Desert; 4) Death Valley National Part. Second Semester – 1) Marine Mammals- Sea World; 2) The San Andreas Fault; 3) Yosemite National Park; 4) Grand Canyon National Park (every other year); 50 Kings River; 6) Santa Cruz Island. For each topic a field trip is offered as an enrichment activity. Students will be introduced to Physical Geology and basic field skills, and will also gain an appreciation for the natural world and an awareness of it limited resources.			
GRADES: 11, 12	LENGTH: 1 Year		

ENVIRONMENTAL SCIENCE AP	REQUIRED ( ) ELECTIVE (X)	CSU (X) UC (X)	LAB FEE: None
PREREQUISITES: None			
Environmental science is a course providing students with the scientific principles, concepts, and methods required to understand the interrelationships of the natural world. It includes political, social, cultural, economic and scientific topics. The major themes included in the course are: science is process, energy conversions are part of all ecological processes, the Earth is an interconnected system, and humans have, and do alter these natural systems.			
GRADES: 11, 12	LENGTH: 1 Year		

OCEANOGRAPHY	REQUIRED ( ) ELECTIVE (X)	CSU ( ) UC ( )	LAB FEE: None
PREREQUISITES: Biology or instructor's approval			
Oceanography is an elective science that combines the sciences of biology, chemistry, physics and geology to study the world's oceans. Oceanography explores the physical and chemical properties of seawater, marine geology, currents, waves and tides as well as marine biology, including fish and marine mammals. A field trip aboard an oceanographic research vessel will give students first-hand experience with oceanographic instruments, research techniques and local marine life, as well as enlighten them as to possible careers in the field of oceanography. **This course may not be offered every year.**			
GRADES: 11, 12	LENGTH: 1 Year		

PHYSIOLOGY	REQUIRED ( ) ELECTIVE (X)	CSU ( ) UC ( )	LAB FEE: None
PREREQUISITES: Biology or instructor's approval			
Human Physiology is an upper-division science elective that explores the general make-up and function of the ten systems of the human body. This laboratory class begins with the study of the anatomical structure and function of each system and investigates the diversity of each system. Many organs that comprise the systems are dissected and microscopically examined for an in-depth understanding. Field trips are planned and projects are assigned based upon individual student interest. This is an outstanding course for any student interested in the field of medicine, including dentistry, nursing and veterinary work. **This course may not be offered every year.**			
GRADES: 11,12	LENGTH: 1 Year		

CHEMISTRY	REQUIRED ( ) ELECTIVE (X)	CSU (X) UC (X)	LAB FEE: None
PREREQUISITES: Algebra and Biology			
For the college bound student, this course introduces the basic concepts of chemistry. Extensive use of algebra to solve chemistry problems both in the lecture and in the laboratory. The lab work is an important part of this course. This advanced laboratory physical science is a necessary and important course in the preparation of students interested in pursuing a career in any science related field including engineering, nursing, medicine or any of the hundreds of science related professions. **Honors level is also offered.**			
GRADES: 11, 12	LENGTH: 1 Year		

PHYSICS	REQUIRED ( ) ELECTIVE (X)	CSU (X) UC (X)	LAB FEE: None
PREREQUISITES: Algebra and Geometry			
A study of the natural laws that govern and describe the physical world. Basic algebra and geometry are used as tools to quantitatively interpret the varied areas of physics: energy and motion; light, electricity and magnetism; atomic and nuclear physics; and relativity. Extensive opportunities to study these phenomena in the laboratory are provided. This course is recommended preparation for college, especially for students interested in science, engineering or premedical studies.			
GRADES: 11, 12	LENGTH: 1 Year		