

SCIENCE CURRICULUM

For additional course description information, please visit the Science department page at:
<http://sabinohighschool.weebly.com/science.html>

Three years of science credits are required for graduation in TUSD. The Arizona universities (U of A, ASU, NAU) require three years of different lab science courses for admission.

EARTH SCIENCE

Graduation Requirements: Science or Elective

Open to Grades: 9 – 11

Course Codes: 03141

Prerequisites: None

Length of Course: 2 Semesters

Note:

Description: Earth Science affects every person in the world, every day. This diverse introductory course covers many aspects of science as they relate to our world and especially to our local environment. In addition to basic scientific skills, students will learn about the origin of our Earth, how it has changed through time, how it is today and what the future may hold for it. In addition, students will investigate the causes and effects of weather, plot California's movement along the San Andreas Fault, study where the dinosaurs roamed and find out what natural substances are used to make items we use daily. Students will learn how these Earth processes affect Arizona.

Homework: As needed.

BIOLOGY

Graduation Requirements: Science or Elective

Open to Grades: 9 – 10

Course Codes: 03121 / 03122

Prerequisites: None

Length of Course: 2 Semesters

Note: Must be taken before end of sophomore year.

Description: Students will study components of the living world. Emphasis is placed on the role of the cell and cellular processes, genetics, evolution and ecology. Labs work will include microscopy in cell biology, classification, modeling of hereditary principles and population dynamics. In addition to learning biological concepts, students will use study and use components of the Scientific Method to investigate life science topics. This class must be taken by the sophomore year and the AIMS Science test is administered to students enrolled during the spring semester.

Homework: As needed.

AP BIOLOGY

Graduation Requirements: Science or Elective

Open to Grades: 10 – 12

Course Codes: 03960 / 03964

Prerequisites: Biology

Length of Course: 2 Semesters

Note: Students are expected to remain in the class the entire year and take the AP exam in May.

Description: This course is an in-depth study of Biology at the college level. Emphasis is on concept development, knowledge acquisition, laboratory techniques, and development of critical thinking skills.

Homework: As needed.

ANATOMY & PHYSIOLOGY

Graduation Requirements: Science or Elective

Open to Grades: 11 – 12

Course Codes: 03181 / 03182

Prerequisites: Biology

Length of Course: 2 Semesters

Note:

Description: Students will study human anatomy and physiology to develop a fascinating understanding into the complexity of one's body. This subject is a gateway to a rewarding career in medicine, science or a host of health-related fields.

Homework: As needed.

CHEMISTRY

Graduation Requirements: Science or Elective

Open to Grades: 10 – 12

Course Codes: 03461 / 03462

Prerequisites: Biology; Geometry

Length of Course: 2 Semesters

Note:

Description: This course introduces the student to the structure of matter, the changes that occur in this structure, and the energy involved in these changes. Chemical reactions are observed and examined in the laboratory.

Homework: Daily

SCIENCE CURRICULUM

AP CHEMISTRY

Graduation Requirements: Science or Elective

Prerequisites: Chemistry
PreCal / Trig
(Recommended "A" or "B" in both classes)

Open to Grades: 11 – 12

Length of Course: 2 Semesters

Course Codes: 03969 / 03970

Note: Students are expected to remain in the class the entire year and take the AP exam in May.

Description: Students should attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. The course should contribute to the development of the students' abilities to think clearly and to express their ideas, orally and in writing, with clarity and logic. **Students are expected to take the AP Chemistry Exam.**

Homework: Daily

PHYSICS

Graduation Requirements: Science or Elective

Prerequisites: Concurrent enrollment in Intermediate Algebra

Open to Grades: 10 – 12

Length of Course: 2 Semesters

Course Codes: 03681 / 03682

Note:

Description: Physics is the study of the physical laws of the universe. It includes the study of motion, electricity, light, magnetism, sound and heat. This class teaches students the concepts of physics with algebra-based problem-solving and numerous hands-on experiments and projects.

Homework: Daily

AP PHYSICS

Graduation Requirements: Science or Elective

Prerequisites: Physics
Pre Calculus

Open to Grades: 10 – 12

Length of Course: 2 Semesters

Course Codes: 03908 / 03909

Note: Students are expected to remain in the class the entire year and take the AP exam in May.

Description: This course provides instruction in each of the following six content areas: kinematics; Newton's laws of motion; work, energy, and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation.

Homework: Daily