

**Units:** 2 **Hours:** 1 Lecture, 3 Laboratory

**Transferable:** No

An introduction to technology in manufacturing, energy production and distribution, communication, business, health occupations, service industry, agriculture, and transportation. Laboratories will emphasize the technology needs of business and industry.

## PHYSICS

### PHYS 1 Introduction to Physics

**Units:** 4 **Hours:** 3 Lecture, 3 Laboratory

**Advisory:** Mathematics 205.

**Transferable:** CSU; UC; CSU-GE: B1, B3; IGETC: 5A; GAV-GE: B1, B3

This course is an introduction to the fundamental physical principles that control the world around us. Students will explore the fundamental principles of physics, their historical development, their application to everyday phenomena, and their impact upon political, social, and environmental issues. Laboratory exercises will explore the everyday world.

### PHYS 2A General Physics

**Units:** 4 **Hours:** 3 Lecture, 3 Laboratory

**Prerequisite:** MATH 8A or MATH 9.

**Advisory:** Eligible for English 250 and English 260.

**Transferable:** CSU; UC; CSU-GE: B1, B3; IGETC: 5A; GAV-GE: B1, B3; CAN: PHYS 2, PHYS SEQ. A

An introduction to the principles of physics using algebra and trigonometry. Topics include kinematics in one and two dimensions, vectors, equilibrium and non-equilibrium applications of Newton's Laws, work and energy, momentum, rotational kinematics and dynamics, simple harmonic motion, elasticity, thermal physics, thermodynamics, and waves.

### PHYS 2B General Physics

**Units:** 4 **Hours:** 3 Lecture, 3 Laboratory

**Prerequisite:** Physics 2A

**Advisory:** Eligible for English 250 and English 260

**Transferable:** CSU; UC; CSU-GE: B1, B3; IGETC: 5A; GAV-GE: B1, B3; CAN: PHYS 4, PHYS SEQ. A

An introduction to the principles of physics using algebra and trigonometry. Topics include electricity and magnetism, light and optics, modern physics, and an introduction to relativity.

### PHYS 4A Physics for Scientists and Engineers - Mechanics/Fluids/Wave

**Units:** 4 **Hours:** 4 Lecture, 2 Laboratory

**Prerequisite:** Physics 2A and Mathematics 1A

**Advisory:** Eligible for English 250 and English 260.

**Transferable:** CSU; UC; CSU-GE: B1, B3; IGETC: 5A; GAV-GE: B1, B3; CAN: PHYS SEQ. B

An introduction to the principles of physics using calculus. Topics include kinematics in one, two and three dimensions, vectors, equilibrium and non-equilibrium applications of Newton's Laws, work and energy, momentum, systems of particles, rotational kinematics and dynamics, simple harmonic motion, elasticity, and waves.

### PHYS 4B Physics for Sci/Engr--Electromagnetism

**Units:** 4 **Hours:** 4 Lecture, 2 Laboratory

**Prerequisite:** Physics 4A

**Advisory:** Mathematics 1B

**Transferable:** CSU; UC; CSU-GE: B1, B3; IGETC: 5A; GAV-GE: B1, B3; CAN: PHYS SEQ. B

Fundamental principles of electricity and electromagnetism. Electric and magnetic fields, AC/DC circuits, Maxwell's equations, and electromagnetic waves. Students gain experience in the application of computers in science.

### PHYS 4C Physics for Sci/Engr--Thermodynamics/Optics/



Photo courtesy of the Gilroy Dispatch

### Modern Physics

**Units:** 4 **Hours:** 4 Lecture, 2 Laboratory

**Prerequisite:** Physics 4B

**Advisory:** Mathematics 2C (may be concurrent).

**Transferable:** CSU; UC; CSU-GE: B1, B3; IGETC: 5A; GAV-GE: B1, B3; CAN: PHYS SEQ. B

Fundamental principles of optics and an introduction to modern physics. Geometric and physical optics, light and quantum physics, wave-particle duality, introduction to atomic and nuclear physics, and supplementary topics. Students gain experience in the application of computers in science.

### PHYS 10 Technical Physics

**Units:** 2 **Hours:** 2 Lecture

**Advisory:** Mathematics 205

**Transferable:** CSU

Designed to combine a series of technical applications such as those used in industry with a sequence of basic physical principles such as mechanics, heat, light and electricity.

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### Physiology: see Biological Sciences

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All courses listed here are part of Gavilan College's approved curriculum. All courses are not offered every semester. Check the Class Schedule for current offerings.