

Biology and Medicine

Campus Location: Cal Poly, San Luis Obispo
Instructor: Michele Roest

Overview

This course offers a fast, fun and enjoyable way to learn the basics of human anatomy and physiology. It provides a strong foundation for students interested in careers in kinesiology, anatomy and physiology, physical therapy and sports medicine

An overview of basic body systems, including structure and function of major organ systems, bone and muscle groups, and interactions between organ systems. Each class will have a Spotlight on Medicine, looking at substances and medicines used to treat different ailments. A field trip to a local hospital provides access to people working medical careers. On the final day students will give 'capstone' presentations about a biology or medical topic of their choice. Students will be able to choose their topics, and work together during class time to prepare a presentation to share.

Learning Objectives

- Learn medical terminology in anatomy, physiology and biological function
- Explore human organ systems and system components, their functions and common dysfunctions
- Visit a hospital and interview people working in medical fields
- Compare common medicines and their effects on human health
- Engage in meaningful communication with others about issues associated with human health and disease.
- Gain awareness and familiarity with the human body, health and medicine -- for life!

Guest Speakers & Excursions

Students will take a trip to the local hospital for a tour of hospital facilities and opportunities to meet staff. An interesting and dynamic speaker will share perspectives on current topics and innovations in health and medicine.

Topics to cover

Week 1

- Medical and anatomical terminology
- The Skeletal System (small group work with mini skeletons)
- The Muscular System: major muscle groups and their actions
- The Heart: The greatest muscle of all
- The Circulatory System: blood typing classroom activity (artificial blood)
- Spotlight on Medicine: Early forms of medical research, and modern treatments for common ailments
- Field Trip: Tour of local hospital

Week 2

- Digestive system, digestive disorders and common treatments
- Nervous and Endocrine Systems
- Spotlight on Medicine: The Story of Insulin (film)
- Viruses, bacteria, fungal infections and cancer
- The Immune System and immunity reactions

Instructor:

Michele Roest is a lecturer in the Biological Sciences Department at Cal Poly in San Luis Obispo. Michele has Bachelor's and Master's degrees in biological sciences. She has been a curriculum developer for K-12 and college-level biology instructor for more than twenty years. Michele is passionate about biology and enjoys sharing her knowledge with others.

Program Structure:

There are 9 class sessions over the two-week course. During the first week, students have class from 9am-12pm, Monday through Friday. The first Thursday class will be an off-site field trip to a local hospital. On the tour, students will meet hospital staff, learn about jobs in the medical field and see special labs and equipment. In Week 2, students have class from 9am-12pm Monday through Thursday. The second Thursday, which is the last day of class, students will present a capstone presentation about a medical topic of their interest.

Tuition

- **Residential Students:** \$4,998
 - Includes: all meals, lodging, excursions, academic program, weekend excursions
 - Excludes: optional airport pickup and drop off service (available for an additional fee)

- **Commuter Students:** \$2,798
 - Includes: academic program, excursions, programming from 9am to 5pm, Monday-Friday
 - Excludes: lodging, breakfast, dinner, weekend excursions

- **Extended Commuter Students:** \$3,398
 - Includes: lunch, dinner, excursions, academic program, programming from 9am to 8pm, weekend excursions
 - Excludes: lodging, breakfast