

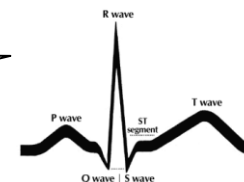


UC/CSU (A-G)
Elective Lab Science

*How do your
muscles
work? Heart?
Bones?*

PHYSIOLOGY-HONORS

*Inquiry and Lab Based
STEM Curriculum*



THE NEXT LEVEL

After taking Biology CP/Honors, Bio AP, Chemistry/Physics CP, H or AP, this specialized inquiry course will take you to the next level! This course is a great combination of anatomy and physiology with complex labs that you have never done before. You will use new lab techniques and develop hands-on skills in a lab science which you will carry with you for the rest of your life!

PRE-REQUISITES: Biology H or Biology CP with a “B” or better grade

COLLEGE PREPARATION: This course will prepare you for your college/university pre-med and other science courses through challenging anatomy/physiology content, field trips, interaction with professional guest speakers, complex hands-on labs and techniques, collaborative student projects, presentation skills, critical thinking, problem solving etc. For interested students, there is an extra credit opportunity to complete an internship and participate in the County and State science Fairs.

GOALS: Learn the Human Anatomy and Physiology content through the following topics: Biochemistry, Cell Biology, Body tissues, Cardiovascular system, Human Skin, Bones and muscles, Nervous system, Senses, Endocrine System, blood circulation and blood pressure, immune system, respiration, digestion, urinary system, water balance, reproduction, different diseases, their symptoms and treatments.



The above topics are taught through interactive methods such as inquiry hands-on labs and activities, laptop probes, online dissections and real dissections, virtual labs, making hypothesis and designing experiments, group projects and writing lab reports.

Labs: Autopsy, macromolecules, membrane transport, DNA extraction, cellular respiration, histology, skin prints, bones, bone dissection, muscle contraction and identification, neurophysiology, heart dissection, eye dissection, vision, blood typing, blood pressure, forensics, enzymes and digestion, respiration, urinalysis, fetal pig dissection and practical exams.

Highlights: UCLA Medical Center Field Trip: ER, Robotics, Hyperbaric Chamber, Prosthetics, Dentistry.

Medical Professionals/Guest Speakers: Heart Surgeon, Pediatric Cardiologist, Orthopedic Surgeon, Neuropsychologist, Registered Nurse, Physician’s Assistant, Scientist, Molecular Biologist, Biochemist and many more...

TEACHER: Dr. Malhotra has a Ph.D. in Biochemistry and Cell Biology. During her Ph.D. and postdoctoral work, she did extensive research and published her work in top American journals. She created and advised the Health Science Major Program since 2002; also coordinates the school’s Science Fair for the County and State competitions

EXTRA CREDIT RESEARCH: You can select your project from any topic in science and create an original STEM research project:

OPPORTUNITIES: UCLA Medical Center Field Trip; College Level Physiology labs; Dissections; Intel Science Talent Contest; California State Science Fair; Ventura County Science Fair; Health Science Major Program

Interaction with Medical Professionals; job shadows and internships at UCLA and other labs

Many TOHS students win awards at the county level and qualify for the State Science Fair every year.

Develop imagination, creativity and perseverance; Use prior knowledge to become problem solvers!

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**Scalpel
please!**

