

BI 358 Investigations in Medical Physiology (V. Pat Lombardi) [136 word description]

This upper division lecture, discussion/laboratory course is ideal for seniors and juniors with aspirations for careers in medicine. It is designed to bridge the gap between textbook knowledge from Guyton's & Hall's *Textbook of Medical Physiology* and practical applications in clinical medicine and research. Basic and applied physiology lectures are followed by presentations by experts in medicine and research. Topic coverage has included the nervous system, neurotransmitters and addiction medicine; immunology, allergies and asthma; cardiovascular physiology and clinical cardiology; respiratory physiology and pulmonology; digestive physiology, nutrition and gastroenterology; endocrinology and clinical treatment of diabetes and thyroid disorders; reproductive physiology and infertility; renal-excretory physiology and nephrology; neonatology, childhood development and pediatrics; and visual physiology and clinical ophthalmology. Background in human anatomy and physiology preferred, but absolute prerequisites are BI 214 or BI 283H or HPHY 314.

Learning outcomes: By the end of the course, students will have:

- implemented homeostatic models to solve problems at multiple levels of organization in applied physiology, medicine and research and demonstrated this ability on weekly quizzes.
- engaged in peer-review of outlines, paper drafts and presentations, and provided feedback on guest speakers.
- examined, analyzed and summarized research in a personal area of interest in medical physiology.
- developed and formalized an outline, review paper and class presentation and assisted in grading these with instructors and peers.
- enhanced scientific writing and presentation skills based on extensive evaluation and instructor and peer feedback.