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BIOC 486.01: Biochemistry

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Biochemistry 486

Putting 4 Years of Theory to Work!

Learn molecular biology and biochemical techniques!

Lab and lecture are integrated into a semester-long research project.

- § Site-directed mutagenesis
- § Recombinant protein expression in bacteria
- § PCR techniques
- § Protein purification
- § Protein characterization
- § SDS-PolyAcrylamide Gel Electrophoresis
- § UV/Vis Spectroscopy
- § Electrochemistry
- § Electron Paramagnetic Resonance

Enrollment is limited, so sign up soon!

BIOC 486

CRN 33040

Currently 2 credits - might be 3 by 2003

McGuirl

TR

9:30A-12:30P

HS 406

The main goal is to understand how mutations in amino acid sequence may affect the biochemical properties of a protein. Each student will prepare a different mutant of azurin, a blue copper protein that is involved in electron transfer during bacterial respiration. The mutants will be purified and characterized by a variety of spectroscopic techniques. At the end of the course, students will compare notes and write a summary of the effects of the various mutations on the biochemical properties of the protein. Students will gain experience in gene cloning and recombinant protein expression in bacteria, site-directed mutagenesis, PCR techniques, protein purification, and protein characterization, including several types of spectroscopy. They will also be given at least one journal article that we will discuss in class.