

Chem 437: Biological and Medicinal Chemistry

Course Outline: Chemical aspects of medically important biological systems and the small molecules that perturb them.

Course Goals

Develop the ability to apply the concepts of acidity and basicity to aqueous systems

Develop an understanding of the theory of spectroscopic techniques

Develop an understanding of a range of analytical or characterization methods

Develop the ability to apply the concepts of nucleophilicity and electrophilicity to chemical reactions

Develop the ability to draw conclusions about relationships between structure and reactivity

Develop an understanding of the chemical properties of biochemical building blocks and biochemical process

Develop an understanding of drug impacts on cells and organisms

Develop an understanding of how and why molecules perturb biochemical processes

Program Goals

Develop the ability to represent chemical information.

Develop an understanding of the use of models, their premises, advantages and limitations.

Develop competence in problem solving.

Develop the ability to use the chemical literature in a critical manner.

Develop the ability to disseminate scientific information orally and in writing.

Develop the ability to engage in scientific discussions.