

IUPUI Chemistry & Chemical Biology GRADUATE COURSES • Spring 2007

The Spring Semester begins January 8, 2007 and ends April 30, 2007 • Classes will be held in the LD building located at Blackford and Michigan Streets. • Registration for Graduate Non-Degree students can be arranged through the Graduate Non-Degree Office, Union Building 518, or by calling 274-1577

For further information, please contact Prof. Martin O'Donnell, 274-6887

542 Inorganic Chemistry

Atomic structure; periodic trends and properties of the elements. Introduction to symmetry and group theory. Valence bond, molecular orbital, and ligand field theories of bonding for inorganic and organometallic compounds. Spectroscopic properties and acid-base, oxidation—reduction, and coordination reactions of inorganic compounds.

Dr. Jeffrey Turner

Class # 18852

Room LD 020

6:00P – 7:15P, MW

Dr. Turner received his PhD from IUPUI. Research areas: Inorganic chemistry, electrochemistry, spin crossover phenomena in transition metal compounds.

652 Synthetic Organic Chemistry

An advanced treatment of methods for preparing major types of organic functionalities and bonds, stressing stereochemical and regiochemical control, and employing mechanistic organic chemistry for understanding choice of reagents and reactions conditions.

Professor Martin J. O'Donnell

Class # 26413

Room LD 020

6:00P-7:15P, TR

Professor O'Donnell received his PhD from Yale University. Research areas: Synthetic methods in amino acid chemistry, phase-transfer reactions, asymmetric synthesis, organometallic chemistry.

696 Special Topics:

Biosynthesis and Physiology

Intermediary metabolism, biosynthesis and regulation.

Professor Eric Long

Class # 18856

Room LD 026

4:30P-5:45P, TR

Professor Long received his PhD from The University of Virginia. Research areas: DNA and RNA recognition by anti-tumor natural products and synthetic agents, mechanisms of DNA strand scission.

696 Special Topics:

Organic Spectroscopy

Application of modern analytical techniques including 1- and 2-D nuclear magnetic resonance (NMR) spectroscopy, infrared spectroscopy, and mass spectrometry to the rational identification of organic structures.

Professor Robert Minto

Class # 22818

Room LD 026

6:00P-7:15P, MW

Professor Minto received his PhD from the University of California, Berkeley. Research areas: Biosynthesis of acetylenic natural products, synthetic methods for isotopically substituted and highly unsaturated molecules, mechanistic biochemistry of the desaturases.

696 Special Topics:

Bioanalytical Chemistry

Introduction to concepts in biosensors and biosensing. The discussion topics include optical, electrochemical and novel biosensors, microarrays, SPR, proteomics, hybridization, immunoassays, reporters and labels, and nanotechnology.

Professor Sapna Deo

Class # 22819

Room LD 020

4:30P – 5:45P, TR

Professor Deo received her PhD from the University of Kentucky. Research areas: genetic modification of fluorescent and bioluminescent proteins and their application in bioanalysis; development of methods for analysis of intrinsically disordered proteins and their interactions with target ligands, proteins, and DNA; design and development of luminescence-based “genetically encoded indicators” for quantitative ‘in vitro’ and ‘in vivo’ analysis of disordered protein-target interactions; pathogenesis of inflammatory diseases such as Crohn’s disease.