IUPUI Department of Chemistry & Chemical Biology • Fall 2006 Graduate Course Offerings

The Fall Semester begins 08/23/06 and ends 12/18/06 • Most classes will be held in the SL or LD buildings located at Blackford and Michigan Streets • Registration for Graduate Non-Degree students can be arranged through the Graduate Office, UN 518, or by calling 274-1577

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

533 Introductory Biochemistry

A one-semester introduction to biochemistry including the structure and function of biomolecules and enzyme kinetics/mechanisms.

Dr. Brenda Blacklock
Class # 3265 Room LE 103
4:30P-5:45P, TR

Dr. Blacklock received her PhD from the University of Alberta. Research areas: Enzymatic reactions involved in fatty acid modification and the role of lipids in signaling pathways in the cell. Specific areas of research include 1) fatty acid elongation by condensing enzymes and 2) sphingolipid biosynthesis and physiological function.

621 Advanced Analytical Chemistry

Methods and principles of chemical instrumentation including spectroscopy, chromatography and electrochemistry.

Professor Sapna Deo
Class # 3267 Room LD 018
6:00P-7:15P, MW

Professor Deo received her PhD from the University of Kentucky. Research areas: Genetic modification of fluorescent and bioluminescent proteins and their applications 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 like Crohn's disease.

651 Advanced Organic Chemistry

Modern structural organic chemistry. Introduction to bonding theory, stereochemistry, and computational chemistry.

Dr. Peter Anzeveno
Class # 7364 Room LD 004
6:00P-7:15P, MW

Dr. Anzeveno received his PhD from Worcester Polytechnic Research Institute. Research interests: New synthetic methodology; organic synthesis, particularly as directed towards natural products.

696 Special Topics:

Seminars in Nucleic Acid Chemistry

Discussions of the chemistry of DNA and RNA including their chemical syntheses, structures, enzymatic manipulation, biochemistry and analyses of ligand binding by drugs, metal ions, and proteins.

Professor Eric Long
Class # 6899 Room LD 020
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.

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Combinatorial Chemistry

This course will explore the ways combinatorial chemistry is being used to solve a wide variety of problems requiring chemical solutions. Examples range from drug discovery to new catalyst creation, and from new "chiral selectors" to new biochemical probes. The course will focus on the rationale for employing a combinatorial approach in chemical discovery. It will teach the solid and solution phase chemistries (principally organic transformations) used, and the methodology, equipment, and screening technology employed to rapidly carry out this approach.

Professor William Scott
Class # 3270 Room LD 020
6:00P-7:15P, TR

Professor Scott received his PhD from University of California, Los Angeles. Research areas: Solid phase synthesis and utilization of unnatural amino acid derivatives. Professor Scott was a research scientist at Eli Lilly & Co. prior to his retirement in 2002.

Biomimetics

Introduction to the world of biomimetic systems considered from the perspectives of chemistry, biology, physics, and engineering, thereby focusing on biomimetics of biomembranes. This course provides a basic overview of molecular interactions found at biointerfaces, discusses the behavior of biomolecules at interfaces, and outlines state-of-the-art engineering approaches for the design of biomimetic systems.

Professor Christoph Naumann
Class # 3271 Room LD 018
6:00P-7:15P, TR

Professor Naumann received his PhD from The Technical University in Munich. Research areas: Biofunctionalization of inorganic solids and polymeric materials; surface-dynamical aspects of biocompatibility of biomaterials; design of photo-luminescent nanoparticles; single molecule fluorescence imaging on bio-artificial membranes and biomaterials.

Forensic Chemistry for Teachers

Three day conference consists of workshops and lectures in adapting forensic science to the high school classroom. Teachers must attend all sessions of the workshop and write a five page paper on how they will use the information to develop forensic science activities in the high school class room.

Professor Jay Siegel
Class # 28783
By Arrangement

Professor Jay Siegel received his PhD in Analytical Chemistry from George Washington University. Research areas: Forensic chemistry in the areas of ink, fibers, cosmetics and automobile paints.