BIOL 440

Term: SPRING 2016  
Course No. & Section: BIOL 440-01

Course Title: MOLECULAR NEUROBIOLOGY

Professor: DR. DEEPA DABIR

Course Description (principal topics covered):

Objectives:
- This course introduces students to the rapidly growing field of neurobiology, the study of the biology of the nervous system and its relationship to behavior and disease

Content:
This course will provide a comprehensive study of the physiological and molecular properties of individual nerve cells and the synaptic connections between them. Basic mechanisms of mammalian nervous system function through the study of human neurological diseases, and how cellular and molecular basis of these diseases is driving therapeutic development. Topics range from neuronal structure and function, communication at the synapse, biophysics of single channel gating, and transmission across chemical and electrical synapses. Additionally actions of drugs on brain at clinical, cellular, and molecular levels will be explored.

Prerequisites/Recommended Background:
- BIOL 201 & BIOL 202
- An UD course in Molecular Biology or Biochemistry is also recommended

Required Texts/References:
- Basic Neurochemistry, 8th edition by Price et al.

Course Work/Expectations:
- Class sessions are 50 minutes long, 2 days a week. There will be 3 exams in all. Students will be assigned scientific papers and be asked to review the literature and present it to your peers. Only one presentation per student will be allowed. This class also involves several write-ups followed by in-class discussions of neurological disorders, their clinical, social manifestations and current therapy available.

Comments: