Additional Courses

Below are elective classes that might be valuable additions to your core Pharmacology graduate courses. Please note that these courses are not offered every academic year.

Credits: 1.5
CONJ 524  Structural Basis of Signal Transduction
CONJ 533  Dynamic Chromosome (weeks 1-5)
CONJ 534  Selected Problems in Nervous System Development
CONJ 537  Mechanism of Transcriptional Regulation (weeks 6-10)
CONJ 539  Modern Approaches to Vaccines
CONJ 541  Molecular Basis of Cellular Processes
CONJ 542  Cell Bio Development (weeks 1-5)
CONJ 544  Protein Structure, Modification and Regulation
CONJ 546  Survey of Technologies for Molecular Biology

MOLMED 504  Topics of Molecular Medicine
MOLMED 559  Scientific Ideas at Work
MOLMED 583  Molecular Targets in Cancer Therapy (weeks 6-10)

Credits: 2 or more
BIOC 530  Introduction to Structural Biology (3 credits)
CONJ 530  Directing Stem Cells Towards Regenerative Medicine (3 credits)
CONJ 556  Drug Addiction: Mechanisms, Prevention and Treatment (2 credits)
ENV H 530  Research Proposal Preparation for Biological Sciences (3 credits)

NEURO 501  Introduction to Neurobiology: Molecular & Cellular Neurobiology (3 credits)
NEURO 502  Introduction to Neurobiology: Sensory & Motor Systems (5 credits)
NEURO 503  Cognitive and Integrative Neuroscience (4 credits)
NEURO 504  Biophysics of Nerve, Muscle and Synapse (3 credits)

BOLD = Offered Autumn 2020
Quantitative Analysis Course Options

BIOL 519: Data Science for Biologists (Winter - 4 credits)
Explores, analyzes, and visualizes biological data sets using scientific computing software. Focuses on the foundations of data wrangling, data analysis, and statistics, particularly the development of automated techniques that are reproducible and scalable to large data sets.

CONJ 526: Introduction to Systems Biology and Quantitative Approaches to Biomedical Sciences (Winter - 1.5 credit)
Covers philosophy of systems biology, experimental design, and the linkages between discovery and hypothesis-driven science. Reviews quantitative systems biology tools for genomics, proteomics, modeling and data integration, and emerging technologies.

MCB 536: Tools for Computational Biology (Autumn - 3 credits)
Introduces computational research methods to graduate students in biomedical science and related disciplines. Provides a survey of the most common tools in the field. Students should have foundatioanal knowledge in reproducible computational science, and can continue learning relevant tools to suit specific research interests.

NEURO 545: Quantitative Methods in Neuroscience (Winter - 3 credits)
Discusses quantitative methods applicable to the study of the nervous system. Revolves around computer exercises/discussion of journal papers. May include linear systems theory, Fourier analysis, ordinary differential equations, stochastic processes, signal detection, and information theory. Prerequisite: NEUBEH 501, NEUBEH 502, NEUBEH 503, or permission of instructor. Instructors: Rieke Offered: jointly with P BIO 545.

UCON 510: Introductory Laboratory Based Biostatistics (Summer Qtr - 2 credits)
Introduces methods of data description and statistical inference for experiments. Covers principles of design and analysis of experiments; descriptive statistics; comparison of group means and proportions; linear regression; and correlation. Emphasizes examples from laboratory-based biomedical sciences, and provides demonstrations using standard statistical programs.