

BIOMEDICAL & PHARMACEUTICAL SCIENCE (BMED)

BMED 291 - Special Topics. 1-6 Credits.

(R-6) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

BMED 545 - Research Lab Rotations in Pharmaceutical Sciences. 1-3 Credits.

(R-6) Offered autumn and spring. Experience in research methods in departmental research laboratories. Level: Graduate

BMED 581 - Research Seminar in Pharmaceutical Science. 1 Credit.

(R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in the pharmaceutical sciences. Level: Graduate

BMED 583 - Research Seminar in Toxicology. 1 Credit.

(R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in toxicology. Level: Graduate

BMED 590 - Research (MS). 1-10 Credits.

(R-10) Offered every term. Directed individual research and study appropriate to the background and objectives of the student. Level: Graduate

BMED 591 - Special Topics. 1-9 Credits.

(R-24) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics. Level: Graduate

BMED 592 - Independent Study. 1-9 Credits.

(R-9) Offered every term. Course material appropriate to the needs and objectives of the individual student. Level: Graduate

BMED 594 - Seminar. 1 Credit.

(R-6) Offered autumn and spring. Readings and discussion of current research literature. Level: Graduate

BMED 599 - Thesis/Professional Paper (MS). 1-9 Credits.

(R-10) Offered every term. Level: Graduate

BMED 605 - Biomedical Research Ethics. 1 Credit.

Offered spring. Overview of biomedical research ethics and regulations. Topics include ethics and morality in science, scientific integrity, conflicts of interest, human and animal experimentation, intellectual property, plagiarism. Level: Graduate

BMED 609 - Biomedical Statistics. 3 Credits.

Offered autumn. Experimental design and statistical analysis relevant to the biomedical sciences. Level: Graduate

BMED 613 - Pharmacology I. 4 Credits.

Offered autumn. Prereq., BIOC 380 or equiv. Fundamentals of pharmacology and drug action. Level: Graduate

BMED 614 - Pharmacology II. 4 Credits.

Offered spring. Prereq., BMED 613. Fundamentals of pharmacology and drug action. Continuation of BMED 613. Level: Graduate

BMED 615 - Molecular Pharmacology. 3 Credits.

Offered alternate years. Prereq., consent of instr. Focus on the basic theories, principles, and practical implications of receptor pharmacology to quantify drug activity. Major emphasis in pharmacodynamics with some time devoted to related pharmacokinetic parameters. Level: Graduate

BMED 620 - Cardiovascular Pharmacology & Toxicology. 3 Credits.

Offered alternate years. Prereq., BMED 613 or 641, or consent of instr. Recent advances in pharmacology and toxicology of the cardiovascular system. In-depth study of regulatory mechanisms and the effect of immune response and xenobiotics on cardiovascular function. Level: Graduate

BMED 621 - Drug Design. 3 Credits.

Offered alternate years. Prereq., Organic Chemistry and Biochemistry or consent of instr. Introduction to the main concepts in medicinal chemistry, drug design and an overview of new chemical entity preclinical and clinical process. Level: Graduate

BMED 622 - Drug Pharmacodynamics. 4 Credits.

Offered alternate years. Organic Chemistry and Biochemistry or consent of instr. Introduction and topical coverage of how drugs form complexes with biological targets to cause an array of responses. Level: Graduate

BMED 623 - Drug Diversity. 3 Credits.

Offered alternate years. Organic Chemistry and Biochemistry or consent of instr. Topics in chemogenomics and diversity oriented synthesis will be covered. Level: Graduate

BMED 624 - Methods in Medicinal Chemistry. 3 Credits.

Offered intermittently. Prereq., Organic chemistry and biochemistry or consent of instr. Novel approaches to small molecule therapeutics for disease targeting. Level: Graduate

BMED 625 - Drug Synthesis. 3 Credits.

Offered intermittently. An introduction to the past and current synthetic approaches and total syntheses of biologically active drugs. Level: Graduate

BMED 626 - Research Methods in Biochemical Pharmacology. 1-3 Credits.

(R-6) Offered every term. Prereq., consent of instr. Laboratory course intended to familiarize students with the instruments, and expertise of current research techniques in the biomedical sciences. Level: Graduate

BMED 627 - Professional Development. 1 Credit.

Offered autumn and spring. Prereq., Organic Chemistry and Biochemistry or consent of instr. Developmental training in presentations, writing, reviewing, literature research, teaching, research methods, grant writing, ethics, and business aspects in medicinal chemistry. Level: Graduate

BMED 628 - Grantsmanship. 1 Credit.

This course is designed to provide graduate students and postdoctoral fellows with the necessary background, tools and hands on experience to be able to confidently write and submit a research grant. The focus is on preparing a fellowship application although training will be provided for more typical investigator initiated grants. The entire process from conception, preparation, review and revision will be covered. This course will be a requirement for students on training grants. No prerequisites are required. Level: Graduate

BMED 630 - Pharmacogenetics. 3 Credits.

Offered alternate years. Prereq., BIOC 380 or 481. The genetic basis of differential drug activity. Level: Graduate

BMED 632 - Advanced Pharmacokinetics. 4 Credits.

Offered Fall. Recent developments and emerging concepts in theoretical and experimental pharmacokinetics, pharmacogenomics, and drug disposition. Critical analysis of the current literature. Level: Graduate

BMED 637 - Topics in Pharmaceutical Sciences and Drug Design. 1 Credit.

(R-12) Offered autumn and spring. Current topics in the pharmaceutical sciences, including pharmacology, pharmacokinetics, medicinal chemistry, and drug design and development. Level: Graduate

BMED 641 - Toxicology I-Principles. 3 Credits.

Offered autumn. Prereq., BIOC 481 or equiv. Introduction to toxicology. Topics include general principles, risk assessment, organ system toxicology, introduction to carcinogenesis, and genetic toxicology. Level: Graduate

BMED 642 - Toxicology II-Agents. 3 Credits.

Offered spring. Prereq., BMED 641. Toxic agents and the diseases caused by those agents. Includes common toxicants in the environment and occupational settings as well as drug induced toxicity. Level: Graduate

BMED 643 - Cellular & Molecular Toxicology. 3 Credits.

Offered autumn. Prereq., BMED 641. Cellular and molecular mechanisms of toxicity. Includes apoptosis, regulation of cell cycle, genetic toxicology, and signal transduction pathways in toxicity. Level: Graduate

BMED 644 - Immunopharmacology and Immunotoxicology. 3 Credits.

Offered alternate years. Prereq., MICB 410 or equiv. The impacts of xenobiotic agents on the immune system. Level: Graduate

BMED 645 - Respiratory Toxicology. 3 Credits.

Offered alternate years. Prereq., BMED 641. The lung and associated immune systems and their response to inhaled immunogenic and toxicological agents. Level: Graduate

BMED 647 - Topics in Toxicology. 1-3 Credits.

(R-9) Offered autumn or spring. Prereq., BMED 613, or 641, or 661. Current topics in toxicology. Level: Graduate

BMED 657 - Topics in Immunology. 1-3 Credits.

(R-9) Offered autumn or spring. Prereq., MICB 410 or equiv. Current topics in immunology. Level: Graduate

BMED 690 - Research (PhD). 1-9 Credits.

(R-50) Offered every term. Directed individual research and study appropriate to the background and objectives of the student. Level: Graduate

BMED 691 - Special Topics. 1-9 Credits.

(R-24) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Level: Graduate

BMED 694 - Seminar. 1-3 Credits.

(R-6) Offered autumn and spring. Prereq., senior or graduate standing. Level: Graduate

BMED 699 - Dissertation (PhD). 1-9 Credits.

(R-50) Offered every term. Level: Graduate