

Pharmacognosy (PMPG)

Courses

PMPG 499. Special Projects in Pharmacognosy. 1-3 hours.

Special topics in pharmacognosy dealing with isolation and characterization of natural products.

PMPG 507. Drug Discovery, Design and Development. 3 hours.

Overview of drug development process from target identification and screening through clinical trials and FDA evaluation. Course Information: Same as BPS 507 and MDCH 507.

PMPG 510. Research Techniques in Pharmacognosy. 3 hours.

Introduction to the techniques used in pharmacognosy. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture.

PMPG 511. Advanced Pharmacognosy. 4 hours.

A theoretical and applied course designed to acquaint the student with the occurrence, isolation, characterization, identification, biosynthesis and activity profile of biologically active natural products. Course Information: Prerequisite(s): PMPG 510 or the equivalent or consent of the instructor.

PMPG 512. Microscopy of Natural Drug Products. 3 hours.

Use of microscopic methods in the identification of natural drugs and herbal products, with emphasis on the use of light and scanning electron microscopes. Course Information: Prerequisite(s): PMPG 517 or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture.

PMPG 513. Principles of Structure Determination and Analysis. 3 hours.

Explores the relationship between structural stability, kinetic properties and function of biopolymers, with particular emphasis on proteins and nucleic acids. Course Information: Same as BCMG 513. Prerequisite(s): GCLS 501 and one year of physical chemistry, or consent of the instructor.

PMPG 515. Structure Elucidation of Natural Products I. 2 hours.

Learn the basic skills needed to elucidate the structure of a natural product by spectroscopic methods by using real-life examples. Course Information: May be repeated to a maximum of 6 hours. Prerequisite(s): Credit or concurrent registration in MDCH 562 and credit or concurrent registration in PMPG 511.

PMPG 516. Structure Elucidation of Natural Products II. 3 hours.

Employing modern computational methods in the structure elucidation and dereplication of a natural product by using real life examples. Course Information: Same as MDCH 516. May be repeated. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Lecture-Discussion.

PMPG 517. Problem-Solving in Plant Taxonomy. 4 hours.

Principles and concepts in plant taxonomy, which include identification, classification, nomenclature, discussion of major recent/modern systems, family characterization and field work methods. Course Information: Prerequisite(s): Consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture-Discussion.

PMPG 518. Correlative Phytochemistry. 2 hours.

Distributional correlation of well-defined groups of secondary phytoconstituents with existing plant classification systems as an aid in the search for biologically active natural products. Course Information: Prerequisite(s): PMPG 517.

PMPG 520. Ethnopharmacology Field Work. 4 hours.

Studies of plants used by primitive peoples as medicinal agents, in defined geographic areas, primarily through interviews with medicine men and the populace. Plant material will be collected for subsequent study. Course Information: Contingent on availability of funds for travel support. Prerequisite(s): PMPG 517 or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Laboratory and one Lecture-Discussion.

PMPG 521. Recent Advances in Pharmacognosy. 2 hours.

A review of recent progress in the chemistry, biosynthesis and biological properties of natural products. Course Information: Prerequisite(s): PMPG 511.

PMPG 522. Laboratory Techniques in Biomolecular Sciences I. 3 hours.

Laboratory research rotations as assigned by the Biomolecular Sciences faculty in the three laboratories of the Center for Biomolecular Sciences in the College of Pharmacy. Course Information: Prerequisite(s): Consent of the instructor.

PMPG 523. Laboratory Techniques in Biomolecular Sciences II. 3 hours.

In a continuation of PMPG 522 students will perform laboratory research rotations as assigned by the Biomolecular Sciences track faculty in the laboratories of the Center for Biomolecular Sciences in the College of Pharmacy. Course Information: Prerequisite(s): PMPG 522; or consent of the instructor.

PMPG 534. Dental and Medical Anthropology Within Human Evolution. 1-3 hours.

Studies the biological and physical anthropology of hominid teeth and the craniofacial complex with relevant medical anthropology, ethnopharmacology, forensic sciences, and paleo-pathology topics. Course Information: Same as ANTH 534 and OSCI 534. Field work required. A lab experience, independent study and a research paper is required for 3 hours of credit. Prerequisite(s): Graduate standing and consent of the instructor.

PMPG 540. Marine Natural Products. 2 hours.

Expose graduate students to field of marine natural product chemistry. Course will include examples of marine antineoplastic agents, marine toxins, and other pharmaceutically relevant marine natural products from various marine organisms. Course Information: May be repeated to a maximum of 6 hours.

PMPG 553. Cancer Biology and Therapeutics. 2 hours.

Fundamentals of cancer biology with emphasis on biological, hormonal and chemotherapeutic drug therapies currently used and in development. Specific treatment approaches to breast, ovarian, prostate and colon cancers will be explored. Course Information: Same as BPS 553 and MDCH 553. Prerequisite(s): Consent of the instructor. Recommended background: Molecular and Cellular Biology.

PMPG 565. Special Projects in Pharmacognosy. 1-3 hours.

Overview of current research topics of interest in pharmacognosy: potential areas-ethnomedicine, biological evaluation, dietary supplements, taxonomy, chemotaxonomy, organism propagation, and applications of contemporary analytical techniques. Course Information: May be repeated up to 3 time(s). Prerequisite(s): Completion of the first year of the program.

PMPG 569. Predictive Strategies in Pharmacognosy. 2 hours.

Consideration of the methods employed for the selection of plants that are most likely to yield biologically active compounds. Course Information: Prerequisite(s): Demonstration of competency in organic chemistry, botany and pharmacology.

PMPG 590. Laboratory Techniques in Pharmacognosy I. 2 hours.

Perform laboratory research rotations as assigned by Pharmacognosy drug discovery track faculty of Program for Collaborative Research in Pharmaceutical Sciences (PCRPS). Course Information: Prerequisite(s): Credit or concurrent registration in PMPG 510 or consent of the instructor.

PMPG 592. Laboratory Techniques in Pharmacognosy II. 2 hours.

In continuation of PMPG 590, student will perform lab research rotations as assigned by Pharmacognosy drug discovery track faculty of the Program for Collaborative Research in Pharmaceutical Sciences (PCRPS) Course Information: Prerequisite(s): PMPG 590 or consent of the instructor.

PMPG 593. Graduate Student Seminar Class. 1 hour.

Provides practice and practical guidance for giving a high quality research seminar. Course Information: Satisfactory/Unsatisfactory grading only.

PMPG 595. Seminar in Pharmacognosy. 1 hour.

Presentation on a current research topic. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 2 hours.

PMPG 598. Master's Research in Pharmacognosy. 0-16 hours.

Research for completion of master's degree. Course Information: Satisfactory/Unsatisfactory grading only.

PMPG 599. Doctoral Research in Pharmacognosy. 0-16 hours.

Research for students in the pharmacognosy doctoral program. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated.