

# NEXT - NEURO EXPER THERAPEUTIC

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## NEXT 601 Advanced Neuroscience

**Credits 2. 1 Lecture Hour. 2 Lab Hours.**

Details of mammalian nervous system, including humans; focus on organization of functional neural systems and their integrative action; use of original research papers.

**Prerequisites:** Approval of instructor.

## NEXT 603 Neuropsychopharmacology

**Credits 4. 4 Lecture Hours.**

Pharmacology as it relates to behavior and the central nervous system.

**Prerequisites:** MSCI 601, MSCI 602 or equivalents or course director approval.

## NEXT 604 Special Regional Human Dissections

**Credits 1 to 3. 1 to 3 Lecture Hours.**

Dissection of special regions with more detail than the medical gross anatomy course; histological, neural and gross anatomical material utilized.

**Prerequisites:** Approval of instructor.

## NEXT 605 Molecular Mechanisms of Drug and Toxin Action I

**Credits 4. 4 Lecture Hours.**

Introduction to the major tools and concepts of pharmacology. This is a two part series. By the end of these courses, the student will understand how selectivity of drug action is determined by pharmacological principles and will have a scientific basis for a rational approach to the study of drug actions and side effects.

**Prerequisite:** Approval of instructor.

## NEXT 606 Molecular Mechanisms of Drug and Toxin Action II

**Credits 4. 4 Lecture Hours.**

Survey of ocular drugs, overview of molecular signaling mechanisms and selected topics in developmental neuropharmacology.

**Prerequisite:** Approval of instructor.

## NEXT 607 Molecular Mechanisms of Drug and Toxin Action III

**Credits 4. 4 Lecture Hours.**

Interaction of drugs and toxins with neurotransmitter systems with primary emphasis on mechanisms involving receptor function that impacts central nervous system integration.

**Prerequisite:** Approval of instructor.

## NEXT 608 Methods in Neurohistology

**Credits 2. 2 Lecture Hours.**

Instruction in anesthetization, perfusion of animals; removal of neural tissues; histological processing, staining of tissues, including immunohistochemistry.

**Prerequisites:** Approval of instructor.

## NEXT 620 Gross Anatomy

**Credits 8. 8 Lecture Hours.**

This course will study the relationship of structures and the functional significance of the human body during its development and adult form as revealed through dissection.

**Prerequisite:** Approval of instructor.

## NEXT 621 Teaching Gross Anatomy

**Credits 4. 1 Lecture Hour. 6 Lab Hours.**

Provides teaching and supervisory experience for graduate students; instructs students in teaching and supervising medical students in Gross Anatomy; students observe in the laboratory and create a lecture presentation or develop an education-based learning module.

**Prerequisite:** NEXT 620 and approval of instructor.

## NEXT 622 Teaching Medical Histology

**Credits 3. 2 Lecture Hours. 2 Lab Hours.**

Provides teaching and supervisory experience for graduate students; instructs students in teaching and supervising medical students in Microscopic Anatomy.

**Prerequisite:** Approval of instructor.

## NEXT 623 Teaching in Medical Neuroscience

**Credits 2. 3 Lab Hours. 5 Other Hours.**

Assist in the teaching of Medical Neuroscience, to include lectures, laboratories and examination setup and proctoring.

**Prerequisites:** Approval of instructor.

## NEXT 681 Seminar

**Credit 1. 1 Lecture Hour.**

Focus will be on critical scientific thinking. Emphasis placed on oral communications, scientific writing and grant preparation.

**Prerequisite:** Graduate student in medicine. Approval of instructor.

## NEXT 685 Directed Studies

**Credits 1 to 6. 1 to 6 Lab Hours.**

Limited investigation in fields other than those chosen for thesis or dissertation.

**Prerequisite:** Approval of instructor.

## NEXT 689 Special Topics

**Credits 1 to 4. 1 to 4 Lecture Hours.**

Selected topics in an identified area of pharmacology and toxicology. May be repeated for credit when topics vary.

**Prerequisite:** Approval of instructor.

## NEXT 989 Special Topics in Medical Anatomy

**Credits 1 to 2. 1 to 2 Lecture Hours.**

Selected topics in an advanced area of medical neuroscience, anatomy, and medical pharmacology.

## NEXT 999 NEXT Problems

**Credits 1.25 to 12. 1.25 to 12 Other Hours.**

This is an on-campus opportunity in the Neuroscience and Experimental Therapeutics department in the College of Medicine that is not defined herein. Experiences may include clinical research, basic science research, library research, other basic science activities, and other clinical activities. Students interested in developing an elective of this type should contact the head of the appropriate department for additional details.