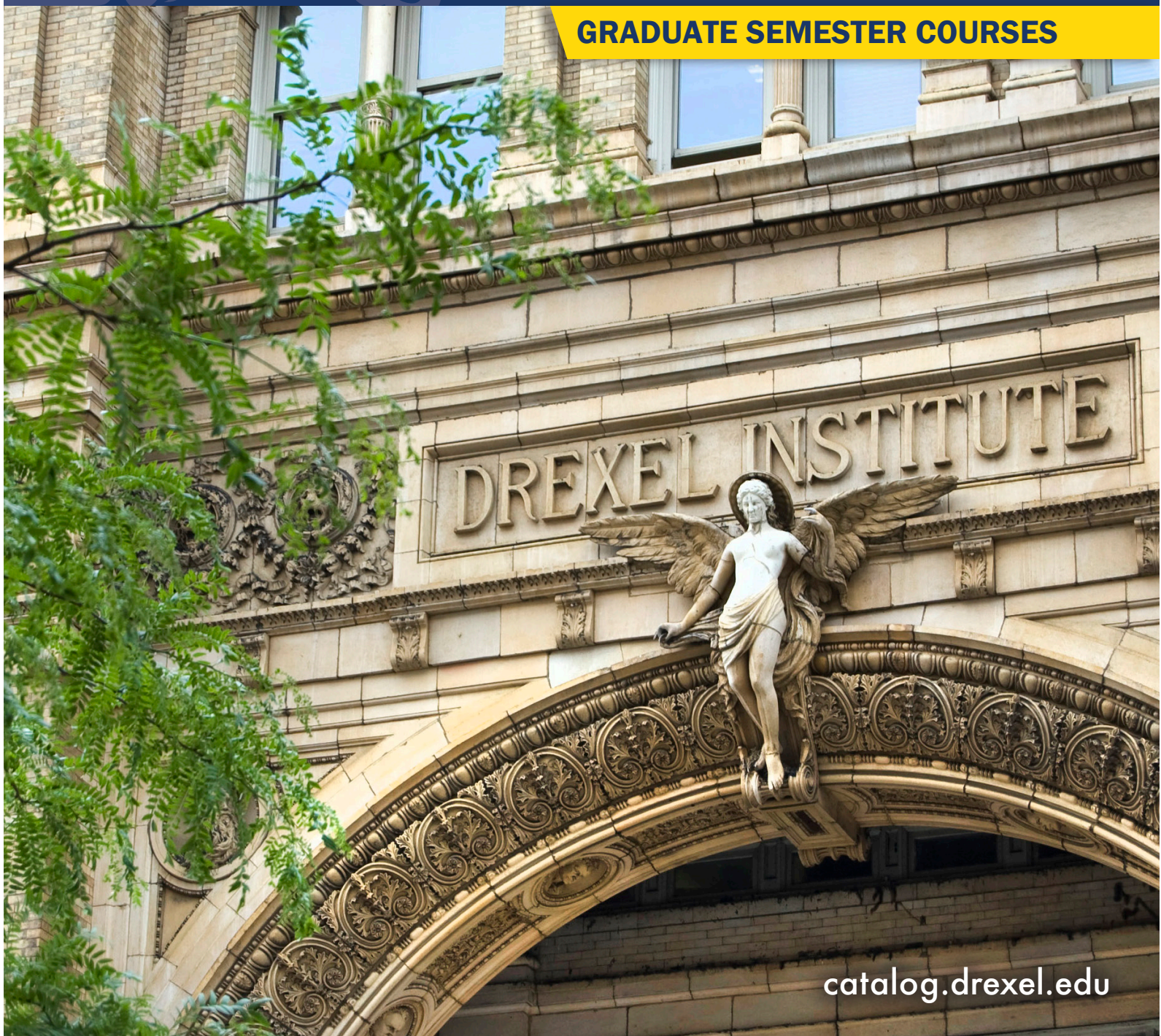




# CATALOG

2022-2023

**GRADUATE SEMESTER COURSES**



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## University Courses (X)

### Anatomy

#### Courses

##### ANAT 501S Neurobiology Topics I 2.0 Credits

Neurobiology topics is a "journal club" course required of all Neuroscience graduate students beginning in the second year. Students, faculty and staff from Neuroscience and other programs are also encouraged to attend as registered or non-registered participants. The course is offered in the Fall and Spring semesters. Students choose topics of interest and a faculty member conducting research in this field is invited to introduce the topic, either from Drexel University or another local university. Students then present research papers in this area to the class to refine their presentation skills, practice critical thinking, and learn about recent research. Recent topics chosen by the class have included: Analysis of Somatosensory Systems, Neuroimmunology, Neurodegenerative Diseases, and Axon Guidance.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

##### ANAT 701S GROSS ANATOMY AND EMBRYOLOGY 0.0 Credits

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated multiple times for credit

##### ANAT 702S MICROANATOMY AND CELL BIOLOGY 0.0 Credits

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**ANAT 703S MEDICAL NEUROSCIENCE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated multiple times for credit

**ANAT 8112S Anatomy\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 8113S ANATOMY - 3 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 8114S ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 821S APPLIED AND SURGICAL ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 850S HUMAN GROSS ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 851S HISTOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 852S NEUROANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 854S ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 860S HUMAN GROSS ANATOMY REEXAM 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 861S HISTOLOGY REEXAM 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 900S ACAD GROSS ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 9094S ELECTIVE - ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 930S ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 932S ANATOMY 2 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 9752S Research - Anatomy\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 9754S RESEARCH - ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 9756S RESEARCH - ANATOMY -6WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 9758S RESEARCH - ANATOMY -8WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 990S GROSS ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 992S ADVANCED NEUROANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT 993S ADVANCED HUMAN GROSS ANATOMY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANAT T580S Special Topics in Anatomy 0.0-12.0 Credits**  
 Topics decided upon by faculty will vary within the area of study.  
**College/Department:** COM School of Biomedical Sciences Professional Studies  
**Repeat Status:** Can be repeated multiple times for credit

**ANAT T680S Special Topics in Anatomy 0.0-12.0 Credits**  
 Topics decided upon by faculty will vary within the area of study.  
**College/Department:** COM School of Biomedical Sciences Professional Studies  
**Repeat Status:** Can be repeated multiple times for credit

## Anesthesiology

### Courses

**ANES 8210S SR. SUB. IN ANESTHESIOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**ANES 8211S CLINICAL ANESTHESIOLOGY - 1WK 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 8212S Clinical Anesthesiology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 8213S CLINICAL ANESTHESIOLOGY - 3WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 8214S ANESTHESIOLOGY SUBINTERNSHIP 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 8218S Sr. Subinternship in Anes 8-wk 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 821S ANESTHESIOLOGY SUBINTERNSHIP 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 822S ANESTHESIOLOGY SUBINTERNSHIP 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 823S CLINICAL ANESTHESIOLOGY -2WKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 8312S Acute/Chronic Pain MGMT\*\*\* 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**ANES 8314S Acute/Chronic Pain Management 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 8714S Pediatric Anesthesiology 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 895S ELECTIVE/ANESTHESIA 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 902S CLINICAL ANESTHESIOLOGY 2-WKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 906S SELECT. CARDIAC ANESTHESIA 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 9092S ELECTIVE-ANESTHESIOLOGY, 2WKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**ANES 9094S ELECTIVE - ANESTHESIA 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 920S CLINICAL ANESTHESIOLOGY 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 931S ELECT. CLIN. ANESTHESIOLOGY 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 951S ACUTE/CHRONIC PAIN MANAGEMENT 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 952S ACUTE/CHRONIC PAIN MGMT-2 WKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 9752S Research-Anesthesiology\*\*\* 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**ANES 9754S Research-Anesthesiology 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated multiple times for credit

**ANES 990S RESEARCH-ANESTHESIOLOGY 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

## Biochemistry

### Courses

**BIOC 502S Biochemistry 1st Lab Rotation 4.0 Credits**

First rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**BIOC 503S Biochemistry 2nd Lab Rotation 4.0 Credits**

Second rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**BIOC 504S Biochemistry 3rd Lab Rotation 4.0 Credits**

Third rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**BIOC 505S Biochemical Basis of Disease 2.0 Credits**

This is an advanced graduate course designed to explore the biochemical basis of a variety of diverse diseases, ranging from the diabetes to Alzheimer's. The course format consists of student presentations that will be augmented by specialized lecture.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IDPT 521S [Min Grade: C] and IDPT 526S [Min Grade: C]

**BIOC 506S Biochemistry Journal Club 1.0 Credit**

A weekly journal club in which students take turns presenting recent papers from the biomedical literature.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 15 times for 100 credits

**BIOC 507S Biochemistry Seminar Series 1.0 Credit**

Weekly research seminars on topics in Biochemistry and Molecular Biology. Seminar speakers include both scientists from the Drexel faculty and scientists from outside institutions.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 15 times for 100 credits

**BIOC 508S Experimental Approaches to Biochemical Problems 3.0 Credits**

This course provides the student with a thorough understanding of the principles underlying the experimental techniques currently used to tackle biochemical problems. A combination of lecture, discussion, investigation of the primary literature, and demonstrations will be used.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IDPT 521S [Min Grade: C] and IDPT 526S [Min Grade: C]

**BIOC 509S Biochemical Basis of Disease 3.0 Credits**

This is an advanced graduate course designed to explore the biochemical basis of a variety of diverse diseases, ranging from the Acquired Immunodeficiency Syndrome (AIDS) to Alzheimer's. The course format consists of specialized lectures that are augmented by student presentation. This course is open to all grad students. May be repeated once for credit.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 3 credits

**BIOC 511S Communication for Researchers 2.0 Credits**

This is a course designed to introduce graduate students to the basics of scientific writing. The course will involve both the discussion of reading assignments and writing assignments for the students, which will be discussed and critiqued in class.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**BIOC 513S Biotechnology Practicum I 4.0 Credits**

The Biotechnology practicum is designed to provide hands-on experience with the techniques encountered in didactic courses and the Biochemistry seminar series. Laboratories for the practicum will be chosen taking into consideration the interests and career goals of the students. The student will carry out directed research in the lab of a faculty member with expertise in the techniques employed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Corequisite:** IDPT 521S

**BIOC 514S Biotechnology Practicum II 4.0 Credits**

The Biotechnology practicum is designed to provide hands-on experience with the techniques encountered in didactic courses and the Biochemistry seminar series. Laboratories for the practicum will be chosen taking into consideration the interests and career goals of the student. The student will carry out directed research in the lab of a faculty member with expertise in the techniques employed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IDPT 521S [Min Grade: B]

**Corequisite:** IDPT 526S

**BIOC 515S Biotechnology Practicum III 8.0 Credits**

The Biotechnology practicum is designed to provide hands-on experience with the techniques encountered in didactic courses and the Biochemistry seminar series. Laboratories for the practicum will be chosen taking into consideration the interests and career goals of the student. The student will carry out directed research in the lab of a faculty member with expertise in the techniques employed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IDPT 521S [Min Grade: B] and IDPT 526S [Min Grade: B]

**BIOC 516S Biotechnology Practicum IV 4.0 Credits**

The Biotechnology practicum is designed to provide hands-on experience with the techniques encountered in didactic courses and the Biochemistry seminar series. Laboratories for the practicum will be chosen taking into consideration the interests and career goals of the student. The student will carry out directed research in the lab of a faculty member with expertise in the techniques employed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IDPT 521S [Min Grade: B] and IDPT 526S [Min Grade: B]

**BIOC 520S Macromolecular Structure & Function 3.0 Credits**

This course is designed to introduce the student to current research topics and latest developments in the area of the structure and function of various types of macromolecules. Topics may include enzyme mutagenesis, protein folding, structure based drug design and structural aspects of receptors, transcription factors and ion channels. Topics may vary in different years.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**BIOC 521S Introduction to Biochemical Data 2.0 Credits**

Modern biochemistry is defined by quantitative analysis of diverse data. While familiarity with tools for data analysis are essential for the modern biochemist, students often have difficulty dealing with numeric information and data tasks when they first encounter them in their own research. In some cases, students need skills that are either never taught formally or are presented only in an abstract sense. This course remedies this by introducing students to common data handling and analysis tasks from biochemistry and related disciplines, in a hands-on and problem-oriented small-group environment.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**BIOC 522S Biochemistry of Drug Discovery & Design 4.0 Credits**

This course will provide in-depth coverage of the preclinical drug discovery and design process, with a special emphasis on the key role of biochemistry at each stage. Biochemical knowledge and skills are required from the early identification of a therapeutic target and hit compounds, through hit-to-lead optimization, to establishing preclinical "absorption, distribution, metabolism, excretion and toxicity" profiles (ADMET) for lead compounds. Discussion of emerging areas in therapeutic design and case studies, both from literature and on-going research programs, will be included to give context to the lecture series. Due to the dynamic nature of many of the aspects of drug discovery, this course will be regularly updated to reflect new trends and technologies.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**BIOC 600S Biochemistry Thesis Research 9.0 Credits**

Research toward the fulfillment of the dissertation is conducted beginning after successful completion of the qualifying examination. Progress is monitored by the student's advisor and department. Advisory Committee or Thesis Committee.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 15 times for 100 credits

**BIOC 603S Advanced Topics in Biochemistry and Molecular Biology 1.5 Credit**

This course will supplement basic information taught in the biomedical sciences first year graduate core curriculum and provide a comprehensive, in-depth analysis of various topics in biochemistry. The course will include a mixture of lectures and literature-based assignments. Lectures are intended to cover topics deemed important for Biochemistry and MCBG students, but which are not covered in depth in the core curriculum. This will include practical aspects of experimental design and execution.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**BIOC 701S MEDICAL BIOCHEMISTRY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated multiple times for credit

**BIOC 702S MEDICAL NUTRITION 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC 850S MEDICAL BIOCHEMISTRY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC 860S MED BIOCHEMISTRY REEXAM 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC 970S BIOCHEMISTRY RESEARCH 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC 9750S RESEARCH-BIOCHEMISTRY-16 WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC 9752S RESEARCH-BIOCHEMISTRY - 2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC 9754S RESEARCH-BIOCHEMISTRY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**BIOC 9756S RESEARCH - BIOCHEMISTRY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC 9758S RESEARCH-BIOCHEMISTRY- 8WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**BIOC 975S STRUCTURAL & MOLECULAR BIOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC 976S BIOCHEMISTRY OF METABOLISM 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC 977S PHYSIOLOGICAL CHEMISTRY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**BIOC T580S Special Topics in Biochemistry 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**BIOC T680S Special Topics in Biochemistry 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

# Cancer Biology

## Courses

### **CBIO 500S Core Cancer Topics 2.0 Credits**

The overall goal of Cancer Topics is to provide the student with exposure to cancer topics as they relate to topics covered in the core curriculum. In addition, students will get exposure to cancer-related topics not covered in other required courses.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### **CBIO 501S Infection, Inflammation and Cancer 2.0 Credits**

This course will be an advanced-level comprehensive survey of infectious agents and inflammatory signals that have been linked to the development of various cancers. The molecular mechanisms that underlie viral, bacterial, and parasite associated human cancers as well as inflammation-mediated cell transformation mechanisms will be the focus of lectures and discussions. Sessions will consist of lectures and discussions of assigned reading.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** BIOC 510S [Min Grade: B]

### **CBIO 503S Cancer Biology Journal Club 1.0 Credit**

The overall goal of the cancer journal club is to provide the student with exposure to primary literature of latest high impact research related to cancer research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 4 times for 4 credits

### **CBIO 504S Cancer Biology 1st Lab Rotation 4.0 Credits**

First rotation. Guided research is conducted on a part-time basis for 8-10 week period. Student will choose from a list of labs conducting cancer related research; the focus will be on acquisition of specific laboratory/molecular biology skills in cancer-related research. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### **CBIO 505S Cancer Biology 2nd Lab Rotation 4.0 Credits**

Second rotation. Guided research is conducted on a part-time basis for 8-10 week period. Student will choose from a list of labs conducting cancer related research; the focus will be on acquisition of specific laboratory/molecular biology skills in cancer-related research. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### **CBIO 506S Cancer Biology Thesis Research 9.0 Credits**

Research toward the fulfillment of the masters thesis. Process is monitored by the student's advisor and department, advisory committee or thesis committee.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 8 times for 18 credits

### **CBIO 508S Cancer Biomarkers and Therapeutics 2.0 Credits**

In this advanced course, students will learn about biomarkers and therapies for human cancers. A topic by topic analysis of key developments and approaches in biomarker discovery and validation along with cancer therapy are presented, with inclusion of pharmacologic, regulatory and basic science perspectives.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### **CBIO 510S Cancer Biology 3.0 Credits**

This upper level graduate course is a team-taught lecture-based course on the biology of cancer including: transformation, oncogenes and suppressor genes, cell cycle, DNA damage/repair, cell signaling, oncogenesis, metastasis, and cancer therapies. Faculty from Fox Chase Cancer Center and the Wistar Institute will participate in the teaching. The purpose of the course is to provide a comprehensive understanding of the principles of cancer biology. It has been designed to introduce students to the advanced concepts of cancer biology and latest conceptual, technical and therapeutic advances. The emphasis in this course is to convey the history and fundamentals of the topics to prepare students for CBIO 512S. This course is intended for second year graduate students interested in basic cancer research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### **CBIO 512S Advanced Cancer Biology 2.0 Credits**

The goal of this course is to provide an in-depth understanding of current cancer biology research. This course is designed to introduce students to the advanced concepts of cancer biology and latest conceptual, technical and therapeutic advances. Students will become familiar with the latest research in many topics related to cancer biology, including cancer stem cells, cancer metabolism and cancer microenvironment, as well as with the basic cancer bioinformatics tools. Students will get first-hand experience in hypothesis development based on current cancer research findings and propose aims to test hypothesis. This course is intended for 2nd year graduate students. CBIO 510S is a prerequisite since a basic understanding of cancer biology will be needed. The prerequisite can be waived by Course Director.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** CBIO 512S [Min Grade: B]

### **CBIO T580S Special Topics in Cancer Biology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit



## Cardiothoracic Surgery

### Courses

**CTSU 8112S Cardiac Surgery\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 8114S CARDIAC SURGERY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 8124S Cardiothoracic Surgery 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 8134S GENERAL THORACIC SURGERY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 8144S Cardiothoracic ICU 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated multiple times for credit

**CTSU 8213S CARDIOTHORACIC- SURGERY 3 WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 8214S Cardiothoracic Surgery 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 826S CARDIOTHORACIC SURGERY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 895S CARDIOTHORACIC SURGERY ELECTIV 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 904S GENERAL THORACIC SURGERY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 9094S ELECTIVE - CARDIOTHORACIC SURG 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**CTSU 9754S RESEARCH-CARDIOTHORACIC SURG. 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

## Clinical Research

### Courses

**CR 500S Epidemiology 3.0 Credits**

Epidemiology is at the core of research professions as it is the study of the distribution, determinants, and the course of health related events in populations, and the efficacy and effectiveness of prevention and intervention strategies.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 501S Emerging Trends in Medical Device Regulation 3.0 Credits**

The Internet of Things poses an evolving set of challenges to the research and development of both conventional and digital medical devices. For example, equipment once found only in hospitals and doctors' offices are increasingly available to the public. This course examines the social, regulatory and scientific factors that define the development of digital and conventional medical devices even as the distinctions between patient and consumer disappear.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 505S Ethical Issues in Research 3.0 Credits**

Students explore ethical issues to sound clinical research, review the foundations of regulations for clinical investigations, and to better understand the operational imperatives of Good Clinical Practices.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 508S Medical Device Combination Product Regulation 3.0 Credits**

This course provides a comprehensive overview of medical device and combination product (drug-device, drug-biologic) regulation. The primary focus will be how medical devices and combination products are regulated by the U.S. Food and Drug Administration (FDA). Topics that will be covered include: (1) FDA's organizational structure, responsibilities, and resources for medical device and combination product regulation; (2) an overview of the laws, regulations, and regulatory processes that govern medical devices and combination products; (3) regulatory and administrative requirements for medical devices throughout the full product life-cycle, including premarket review, postmarket requirements, and enforcement programs.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 510S Sponsored Projects Finance 3.0 Credits**

The study of managing and monitoring external funding sources for research projects. Topics include: rules and regulations, proposal preparation and submission, cost accounting standards, salaries and benefits of staff, direct and indirect costs, the costing of equipment and facility use.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 511S The History of Misconduct in Biomedical Research 3.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 512S Fundamentals of Academic Research Administration 3.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 513S Business Processes and Contemporary Concerns in Pharmaceutical R & D 3.0 Credits**

Bringing a new compound or device through a successful product launch in the bio-pharma or device industry is hugely expensive. Failures occur when information and business processes are inadequately used or inappropriately applied. This course will provide an overview of the processes most critical to launch from both clinical and business perspectives. Students will understand the R and D process as if they were participating in development and launch of new compounds, devices (including diagnostics), and biosimilars.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 514S World Wide Regulatory Submissions 3.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 515S Intro to Clinical Trials 3.0 Credits**

This course introduces regulatory responsibilities of clinical investigators, sponsors, monitors, IRBs, FDA -all those parties intimately involved in clinical research. Information and exercises are designed to reinforce the elements of Good Clinical Practices.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 518S Clinical Trial Budgeting 3.0 Credits**

The overall cost of drug development has increasingly become a controversial subject with estimates varying from hundreds of million to over a billion dollars. One of the larger components contributing to this is the cost of clinical trials required for regulatory approval. Accuracy in the development of clinical trial budgets is crucial for both small and large pharmaceutical companies. The budget variance for clinical studies, from forecast to actual costs, averages about 10%. Overestimating the cost of clinical studies is equally problematic and results in wasted resources and a higher opportunity cost.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 520S Applications of Clinical Research Biostatistics 3.0 Credits**

Examines role of the statistician in clinical research. Course includes a discussion of the language of statistics to facilitate communication with the clinical research project team, basic methods of describing data, fundamentals of probability, simple models and methods of parameter estimation and statistical software packages for reporting data.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 523S Current Issues in Review Boards 3.0 Credits**

Review boards form the basis for careful review and oversight of clinical research. This course will look in detail at the regulatory requirements of review boards as related to clinical research, as well as the roles and responsibilities of review boards and other associated topics.

The differences between the areas of responsibility of review boards, the Office of Human Research Protections (OHRP), and the Office of Research Integrity (ORI), as well as data safety monitoring, subject compensation and other topics will be covered. The educational elements of this course are based upon the federal regulations, the procedures, and the practices of review boards with particular attention paid to the organization, the research review requirements and continuing review, as well as other pertinent topics.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 525S Scientific Writing and Medical Literature 3.0 Credits**

This course teaches the medical professional how to read for understanding and how to evaluate the validity of information found in a medical or scientific paper. The course offers students an understanding of the publishing process, how to publish an academic paper. The class explores the basics of writing a review of the medical literature. In addition, students learn how to recognize, enjoy, and employ various types of medical writing in their work.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 527S Clinical Data Management 3.0 Credits**

This course will provide the student an opportunity to learn and understand the regulatory and scientific components of clinical data management. In addition, the essential documents utilized throughout the clinical data management process will be examined and incorporated into the weekly lectures. This course is vital to understanding and applying the principles and practices of clinical data management as they are applied within the prescribed federal and global regulatory framework. To any company that develops healthcare products, the lifeblood of their product line and corporate existence depends entirely on the quality of the respective clinical data that is generated.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 535S Current Federal Regulatory Issues in Biomedical Research 3.0 Credits**

This course explores how the rapid pace of scientific discovery and the changing ways in which patients, researchers, policymakers and the public interact are forcing a never-ending reassessment of how to govern biomedical research. While most core principles remain in place, this course examines where and how innovation requires a new look at existing approaches.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 536S Clinical Project Management 3.0 Credits**

Project management has been a well-established practice outside the pharmaceutical industry for many decades. However, with ever-increasing pressures of competitors, regulatory requirements, generic drugs and medical device innovations, its utilization is essential. It is more important than ever to use project management techniques to get products to market because, as we all know, "time is money". This course will explore a strategic approach to pharmaceutical and medical device project management.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 541S Patient Recruitment and Informed consent 3.0 Credits**

Clinical trials represent the link between scientific discovery and medical effectiveness. Hundreds of innovative therapies are developed in the laboratories, but few make it past early development, if at all. Clinical trials today can cost hundreds of millions of dollars and take years to research. New clinical research starting for pharmaceuticals and medical devices is on the increase. Investigational New Drugs (IND) submissions have been growing steadily over the past several years. In order to support the increase in research, it becomes more imperative to accelerate patient recruitment and enrollment. However promising new drugs and devices may be, the research cannot move forward without enough subjects who are willing to participate and who will remain for the duration of the study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 545S Pharmaceutical Law 3.0 Credits**

Presents principles and practices of the Federal Food, Drug and Cosmetic Act governing the research and development of pharmaceuticals and biologics for both humans and animals including an analysis of legal and social constructs affecting industry and the academic clinical investigator with emphasis on FDA enforcement actions.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 546S Clinical Outsourcing 3.0 Credits**

This course will provide an overview of the pertinent aspects of and current issues in outsourced clinical research and development. The course will identify predominant outsourcing models and strategies, discuss how effective outsourcing relationships may be initiated and maintained through measurement and action on key operational, quality and relationship metrics, and explore perspectives on how the clinical outsourcing landscape will continue to evolve in years to come. While concepts pertaining to procurement, quality and performance management are covered, it is not expected, nor required that students be fluent in these disciplines.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 550S Leadership Skills 3.0 Credits**

This course is an in-depth analysis of specific human capital, organizational behavior and project management issues facing research facilities as they pertain to larger, integrated organizations. Selected topics include: high impact communications, negotiating, motivation and recognition.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 551S International Regulatory Affairs 3.0 Credits**

Overview & analysis of the medical product regulatory processes within the world's major markets, with an emphasis on pharmaceutical requirements. The key strategies required from preclinical product development & marketing approval - post-approval of medical products in the United States, European Union, & other markets will be compared & discussed. This course will cover the salient features of international regulatory affairs; the World Health Organization & international organizations; international law General Agreement on Tariffs and Trade & Trade-Related Aspects of Intellectual Property Rights & its impact on medical products; international regulatory agencies; & product development, marketing authorization, & post-approval requirements for pharmaceuticals, biologics, medical devices, & food & cosmetics.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 555S Compliance & Monitoring Issues 3.0 Credits**

This course focuses on measuring and improving clinical trial performance as a means of saving time and money, while ensuring quality health care, as well as offering to patients both safe and effective therapeutic products. Students are required to develop milestone efficiencies through the use of process-performance data.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 565S Contemporary Issues in Human Research Protection 3.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 570S Principles and Practice of Pharmacovigilance 3.0 Credits**

This course is an introduction to the ethical, clinical, and regulatory complexities of medication safety and matters thinking skills for improving the quality and effectiveness of drug safety monitoring for both the pharmaceutical industry and its impact on the public.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 571S Health Information Technology in Biomedical R&D 3.0 Credits**

This course focuses on the challenges and opportunities in the development and use of health information technology in facilitating R&D and encouraging patient engagement. The course provides an overview of the regulatory requirements of information technology in support of healthcare research and biomedical product development. It includes a focus on the privacy and data security and interoperability mandates. This course also examines the dynamic environment in which medical device product research is conducted because of the use of information technology, the adoption of software applications designed for the mobile marketplace and the blurring of the distinctions between patients and consumers.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 573S Patient Generated Data in Clinical Research 3.0 Credits**

This course will provide an overview of the use of patient-generated data in clinical research and development. The course will describe foundational elements for use of patient-reported data in clinical research, as well as the operational considerations for collecting patient-generated data and working with solution providers offering technology and services for the same. While we will touch upon technical concepts as part of the course material it is not expected, nor required that students be fluent in these disciplines beyond what is covered in course materials.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 600S Designing the Clinical Trial 3.0 Credits**

Designers and ethical, clinical, strategic issues surrounding clinical drug research are the focus of this course. Topics include design of trials for Phases one through four, an overview of the statistical component of a clinical trial, monitoring of the trial, and managing clinical data.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** CR 515S [Min Grade: C]

**CR 609S Innovative Product Development 3.0 Credits**

This comprehensive course provides a solid foundation in new therapeutic product research and development for the subsequent courses in the CROM program. This course focuses on the process of drug and medical device development from early research, discovery, and product formulation, through the federal requirements for proving safety and efficacy.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 612S Fundamentals of Compliance 3.0 Credits**

The study of the federal bodies and regulations that govern research. Topics include: the rules and regulations surrounding HIPAA and how it affects research on human subjects, the history and current role of the FDA, IACUC, and the IRB within the research arena.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 614S Introduction to Clinical Pharmacology 3.0 Credits**

This course will provide a comprehensive overview of clinical pharmacology, pharmacokinetic/pharmacodynamic principles, and translational science as they pertain to drug development in the pharmaceutical industry. The objective of the course is to provide the student with an understanding of how clinical pharmacology principles and regulatory guidance are applied in transitioning a new molecule into human testing, as well as how product labeling for the final product is developed, based on the attributes of the drug.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CR or major is CROM.

**CR 617S Informatics in Pharm Res & Development 3.0 Credits**

Using a combination of printed materials, case studies, literature reviews, and on-line discussions, this course will cover past and present contributions of computer applications in pharmaceutical research and development. In addition, the student will be challenged to portend where technological advances may prove to be strategically beneficial in the future.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CR or major is CROM.

**CR 620S Regulatory, Scientific and Social Issues Affecting Biotech Research 3.0 Credits**

Biotechnology is among the most ambitious and controversial areas of medical research. This course delves into how FDA approaches clinical research for this wide range of products at a time when policymakers focus not only on genomics, but on personalized medicine and the use of big data, software and social policy.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 625S Health Policy and Economics 3.0 Credits**

The study of the development, analysis and communication of economic data in the context of clinical research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 631S Applications of Clinical Research Biostatistics II 3.0 Credits**

This course will cover in some in-depth biostatistics topics of interest in clinical trials that are not usually covered in introductory biostatistics courses. The course is designed to focus on learning and understanding biostatistics methods used in the clinical research realm of the pharmaceutical industry. Drug development is the process of finding and producing therapeutically useful pharmaceuticals and of turning them into high-quality formulations of safe and effective medicines, while delivering valuable information about their doses and dosing intervals, anticipated effects and adverse events.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** CR 520S [Min Grade: B]

**CR 633S Quality Assurance Audits 3.0 Credits**

This course provides the student with an in-depth knowledge of compliance and quality assurance issues as well as the related regulations inherent in the drug development process. Students develop auditing plans and strategies for conducting compliance inspections.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 635S Strategic Planning 3.0 Credits**

This course introduces the student to the project management and planning process. Topics include: project communications, leadership, objectives, scope, success criteria, procurement, cost estimating, control mechanisms, developing mission statements and devising strategies that turn vision into reality. May be repeated twice for credit.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 637S Risk Management in Clinical Research 3.0 Credits**

This course will provide an overview of the foundational concepts and practices of risk management and current challenges and opportunities in applying risk management and risk-based approaches in clinical research and development and as described in applicable regulatory guidance. The course will identify pertinent tools and strategies for assessing and measuring risk, as well as defining plans for risk controls and risk response. Relevant case study examples will be presented for synthesis and illustration of concepts in practice.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR 639S Healthcare Inequities in Biomedical Research 3.0 Credits**

The course examines the existence of systemic racism, sexism and other forms of bias and discrimination in the conduct of biomedical R&D that have resulted in healthcare disparities and inequities. Students will learn to identify the various forms of bias and discrimination that are and could be embedded in the way biomedical researchers create and access data used to make decisions about product development. Students also will be introduced to the history of healthcare inequities and bias in the healthcare system and in medical research to help them understand why people of color and of differing ethnicities and cultures and those in the LGBTQ+ communities harbor mistrust of the health system.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CR I699S Independent Study in Clinical Research 1.0-12.0 Credit**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**CR T580S Special Topics in Clinical Research 1.0-12.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**CR T680S Special Topics in Clinical Research 1.0-12.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**CR T780S Special Topics in Clinical Research 1.0-12.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**CR T880S Special Topics in Clinical Research 1.0-12.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**CR T980S Special Topics in Clinical Research 1.0-3.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

# Clinical Research Health Prof

## Courses

### CRHP 501S Research Health Professions I 3.0 Credits

CRHP requires research plus a 7-10 page journal-type paper on a topic approved by the Program Director. Research may include a broad spectrum of clinical studies such as: retrospective studies; bench-top studies in conjunction or not with pharmaceutical companies; development of new clinical methodologies/techniques; or development/evaluation of new clinical devices.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRHP.

### CRHP 502S Research Health Professions II 3.0 Credits

CRHP requires research plus a 7-10 page journal-type paper on a topic approved by the Program Director. Research may include a broad spectrum of clinical studies such as: retrospective studies; bench-top studies in conjunction or not with pharmaceutical companies; development of new clinical methodologies/techniques; or development/evaluation of new clinical devices.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRHP.

**Prerequisites:** CRHP 501S [Min Grade: S]

### CRHP 503S Research Health Professions III 3.0 Credits

CRHP requires research plus a 7-10 page journal-type paper on a topic approved by the Program Director. Research may include a broad spectrum of clinical studies such as: retrospective studies; bench-top studies in conjunction or not with pharmaceutical companies; development of new clinical methodologies/techniques; or development/evaluation of new clinical devices.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRHP.

**Prerequisites:** CRHP 501S [Min Grade: S] and CRHP 502S [Min Grade: S]

### CRHP 504S Research Health Professions IV 3.0 Credits

CRHP requires research plus a 7-10 page journal-type paper on a topic approved by the Program Director. Research may include a broad spectrum of clinical studies such as: retrospective studies; bench-top studies in conjunction or not with pharmaceutical companies; development of new clinical methodologies/techniques; or development/evaluation of new clinical devices.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRHP.

**Prerequisites:** CRHP 501S [Min Grade: S] and CRHP 502S [Min Grade: S] and CRHP 503S [Min Grade: S]

### CRHP 505S Research Health Professions V 3.0 Credits

CRHP requires research plus a 7-10 page journal-type paper on a topic approved by the Program Director. Research may include a broad spectrum of clinical studies such as: retrospective studies; bench-top studies in conjunction or not with pharmaceutical companies; development of new clinical methodologies/techniques; or development/evaluation of new clinical devices.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRHP.

**Prerequisites:** CRHP 501S [Min Grade: S] and CRHP 502S [Min Grade: S] and CRHP 503S [Min Grade: S] and CRHP 504S [Min Grade: S]

### CRHP 506S Research Health Professions VI 3.0 Credits

CRHP requires research plus a 7-10 page journal-type paper on a topic approved by the Program Director. Research may include a broad spectrum of clinical studies such as: retrospective studies; bench-top studies in conjunction or not with pharmaceutical companies; development of new clinical methodologies/techniques; or development/evaluation of new clinical devices.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRHP.

**Prerequisites:** CRHP 501S [Min Grade: S] and CRHP 502S [Min Grade: S] and CRHP 503S [Min Grade: S] and CRHP 504S [Min Grade: S] and CRHP 505S [Min Grade: S]

### CRHP 507S Research Health Professions VII 3.0 Credits

CRHP requires research plus a 7-10 page journal-type paper on a topic approved by the Program Director. Research may include a broad spectrum of clinical studies such as: retrospective studies; bench-top studies in conjunction or not with pharmaceutical companies; development of new clinical methodologies/techniques; or development/evaluation of new clinical devices.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRHP.

**Prerequisites:** CRHP 501S [Min Grade: S] and CRHP 502S [Min Grade: S] and CRHP 503S [Min Grade: S] and CRHP 504S [Min Grade: S] and CRHP 505S [Min Grade: S] and CRHP 506S [Min Grade: S]

### CRHP T580S Special Topics in Clinical Research for Health Professionals 0.0-12.0 Credits

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

# Communication & Preventative Medicine (noncredit)

## Courses

### CPMH 810S History of Medicine\*\*\* 0.0 Credits

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**CPMH 820S Medical Terms Greek/Latin 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 821S DEATH AND DYING 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 822S HISTORY OF MEDICINE (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 824S Medicine & Art 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 832S MEDICINE AND RELIGION (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMH 833S MEDICINE AND SOCIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 834S WOMEN IN MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 835S Medical Spanish I 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMH 836S Medical Spanish II 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMH 841S CAREGIVER/PARADIGM FOR HLTH CA 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 843S FOLK & POPULAR HLTH CARE ALT. 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 844S Creative Writing for Physicians 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 845S Practice of Making Abstract Art 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 846S Contemplative Studies 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 847S Trauma & Healing 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 848S Urban Illness Experience 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 849S Women in Medicine 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 921S DEATH AND DYING 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 927S MEDICINE AND LITERATURE (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMH 933S MEDICINE AND SOCIOLOGY (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 935S MEDICAL SPANISH 1 ( S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 936S Medical Spanish II (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 937S MEDICAL SPANISH WKSP (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 939S Seminars in Women's Health: MSI 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 940S Seminars in Women's Health: MSII 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 941S The Healer's Art 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 942S MODES OF MEDICINE AND SCIENCE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 943S FOLK&POP HLTH CARE ALT II 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 946S MEDICINE & LAW (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 947S ETH.CONSID./NEUR-DISORDERS S/U 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 948S CREATIVE ARTS THERAPIES IN MED 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 949S Cutting Cold Flesh: Perspectives from the Humanities 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 950S ETHNICITY, CULTURE & MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 951S DEATH & DYING (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMH 952S MEDICINE & ART (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMH 953S HISTORY OF MEDICINE II: (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 954S HEALTH LAW HUMANITIES (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 955S MEDICINE & FILM (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 956S HOME CARE ELECTIVE (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMH 957S MEDICINE & SPIRITUALITY (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMH 958S HISTORY OF MEDICINE-(S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMH 959S Ethics Hum Right&Glob Hlt S/U 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 960S Stress Reduc: Mind Per Prof\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMH 961S Training the Physician Eye\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**CPMH 999S Special Topics 0.0-5.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 50 credits

## Communication & Preventive Medicine (credit)

### Courses

**CPMD 700S BIOETHICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 701S PRINCIPLES OF MEDICAL RESEARCH AND EPIDEMIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 9 times for 999 credits

**CPMD 702S BIOETHICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 703S COMMUNITY EDUCATION EXPERIENCE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 751S COMMUNITY AND PREVENTIVE MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 9 times for 999 credits

**CPMD 752S Business of Healthcare 0.0 Credits**

Preparation for the business aspects of today's medical environment is vital to being an effective physician. This course provides future physicians with a practical overview of the policy, financial, legal and service delivery context in which they will practice.

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 790S Epidemiology Journal Club\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 8214S CLINICAL EPIDEMIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMD 8216S CLINICAL EPIDEMIOLOGY - 6 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMD 8218S CLINICAL EPIDEMIOLOGY -8WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMD 821S CLINICAL EPIDEMIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit



**CPMD 822S RESEARCH IN MEDICAL HUMANITIES 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 824S OCCUPATIONAL & ENVIRONMENTL HL 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 825S PUBLIC HEALTH PRACTICE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 826S COMM HLTH PROMO&DISEASE PREVEN 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 8314S PUBLIC HEALTH PRACTICE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 8412S COMM HLTH PROMO-DIS.PREVEN 2WK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMD 8414S COMM HLTH PROMO&DIS PREVENTION 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 8415S COMM HLTH PROMO & DIS PREVENT. 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 8514S RESEARCH IN MEDICAL HUMANITIES 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMD 8614S Medical Informatics 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 8616S MEDICAL INFORMATICS- 6 WKS. 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 8618S MEDICAL INFORMATICS- 8 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 8714S OCCUPATIONAL&ENVIRONMENTL HL 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 895S FAMILY/COMM. MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 9094S ELECTIVE - FAMILY & COMNTY MED 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 9096S ELECTIVE-FAMILY&COMM MED-6WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMD 9098S ELECTIVE-FAMILY & COMM MED 8WK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**CPMD 974S MEDICAL INFORMATICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CPMD 999S Special Topics 0.0-5.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 2 times for 12 credits

## Critical Care

### Courses

**CRIT 8214S SURGICAL INTENSIVE CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**CRIT 821S SURGICAL INTENSIVE CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

## Dermatology

### Courses

**DERM 8111S CLINICAL DERMATOLOGY - 1 WEEK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**DERM 8112S Clinical Dermatology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**DERM 8113S CLINICAL DERMATOLOGY - 3 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**DERM 8114S Clinical Dermatology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**DERM 8212S Dermatopathology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**DERM 8214S DERMATOPATHOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**DERM 855S CLINICAL DERMATOLOGY - 1 WEEK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**DERM 856S CLINICAL DERMATOLOGY -2 WEEKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**DERM 857S CLINICAL DERMATOLOGY - 3 WEEKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**DERM 858S CLINICAL DERMATOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**DERM 895S DERMATOLOGY ELECTIVE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**DERM 9092S ELECTIVE-DERMATOLOGY-2WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**DERM 9093S ELECTIVE-DERMATOLOGY 3WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**DERM 9094S ELECTIVE - DERMATOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**DERM 970S DERMATOPATHOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**DERM 9746S Research - Dermatology 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**DERM 9754S Research - Dermatology 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit

## Drexel Pathway to Medicine

### Courses

**DPMS 500S Medical Science Preparation 1.0 Credit**

This course is an introduction and integration of biochemistry, medical physiology, and microanatomy from the medical school curriculum. Other course objectives include the active development of time management and study skills specific for each individual student.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**DPMS 501S Critical Thinking and Scientific Communication Seminar 2.0 Credits**

This is a 2 credit course designed to introduce students to the use of biomedical literature. Students will be instructed in the use of actual and virtual library resources and search engines in order to acquaint them with the resources available to locate information relevant to their studies. Through the use of assigned readings of articles from medical journals and in-class presentations, discussions, and quizzes, students will learn how to critically evaluate the biomedical literature. The course will also provide students with the basics of scientific writing.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**DPMS 502S Accelerated Introductory Medical Biostatistics 3.0 Credits**

This 3 credit web-based course is an introductory biostatistics course designed to focus on learning and applying the statistical methods most often used in clinical trials and medical field. Biostatistics has become increasingly important in the pharmaceutical and health care industry, from the process of molecule screening, clinical trials, launch of products to post-marketing data. Clinicians participating in or directing research projects will find knowledge about biostatistics indispensable. When reading articles in medical journals, health professionals must understand biostatistics in order to decide whether they can believe the results presented in the literature, how the study results apply to patient care, or how to interpret information about drugs. Biostatistics covers the development and application.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**DPMS 503S Neurobiology of Mental Illness 3.5 Credits**

This course is designed to introduce students to the neurobiological mechanisms underlying mental illness. Students will learn the structure and function of the cortical and limbic circuitry responsible for processing thought and emotion. They will learn the basics of psychiatric diagnosis and discuss various treatment strategies. Students will also be exposed to strategies for how research is conducted in the field of mental illness.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**DPMS 504S Functional Neuroanatomy 4.5 Credits**

This is a 4.5 credit course designed to introduce students to the neuroanatomy of the human body. It will provide extensive information regarding structure and function relationships in the central nervous system. It will also provide introductory information on neurophysiology, cellular neuroscience and systems neuroscience topics.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**DPMS T580S Special Topics in Drexel Pathway to Medical School 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated multiple times for credit

# Emergency Medicine

## Courses

### EMMD 795S EM Post Year 1 Summer Research 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

### EMMD 8112S Advance elective in Emergency 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8114S ADV ELECT IN EMERG MED SVCS 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

### EMMD 8124S Critical Care Subinternship 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8132S Emergency Medicine\*\*\* 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8133S EMERGENCY MEDICINE - 3WKS 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8134S EMERGENCY MEDICINE 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8136S EMERGENCY MEDICINE- 6 WKS 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

### EMMD 8144S RESUSCIT & EMERGENCY MED RESEA 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8152S Medical Toxicology\*\*\* 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8154S Medical Toxicology 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8164S EMS and Disaster Medicine 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

### EMMD 8184S Emergency Medicine Simulation 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8214S EMERGENCY MEDICINE 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

### EMMD 821S CRITICAL CARE SUBINTERNSHIP 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 822S EMERGENCY MEDICINE 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 824S EMERGENCY MEDICINE/RESUSCITATI 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8252S ED Ultrasound & Toxicology\*\*\* 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

### EMMD 8254S ED Ultrasound and Toxicology 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 825S RESUSCIT & EMERGENCY MED RESEA 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8262S EM Ultrasound\*\*\* 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

### EMMD 8264S Emergency Dept Ultrasound 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

### EMMD 826S MEDICAL TOXICOLOGY 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8274S EM Point of Care Ultrasound 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

### EMMD 8284S Evidence Based Emergency Med 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

### EMMD 8312S EMERGENCY MEDICINE - 2WKS 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

### EMMD 8414S Wilderness Medicine 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8503S EMERGENCY MED SUBINTERN-3WKS 0.0 Credits

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

### EMMD 8504S Emergency Med Subinternship 0.0 Credits

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**EMMD 895S EMERGENCY MEDICINE-ELECTIVE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**EMMD 897S ADV ELECT IN EMERG MED SVCS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**EMMD 9092S ELECTIVE-EMERGENCY MED 2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**EMMD 9094S ELECTIVE - EMERGENCY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**EMMD 960S RESEARCH ELEC. IN EMERG MED. 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**EMMD 9752S RESEARCH-EMERGENCY MED 2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**EMMD 9754S RESEARCH - EMERGENCY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

## Family Medicine

### Courses

**FAMD 8010S Family Medicine 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8015S Family Medicine Clerkship 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 801S FAMILY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8112S Family Medicine\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8113S FAMILY MEDICINE - 3WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8114S FAMILY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 822S MANAGED CARE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 828S FAMILY PRACTICE/AMBULATORY CAR 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 829S FAMILY PRACTICE/SPECIAL INTERE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8311S PRIMARY CARE SPORTS MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8312S Sports Med for Primary Care\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8313S PRIMARY CARE SPORTS MED-3WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8314S Primary Care Sports Medicine 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8322S Geriatrics\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8324S Geriatrics 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated multiple times for credit

**FAMD 843S FAMILY MEDICINE - 3 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 844S FAMILY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 846S INDIAN HEALTH SERVICE-6 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 847S INDIAN HEALTH SERVICE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8612S FAMD MED/SPORTS MED - 2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**FAMD 8614S Family Med/Sports Medicine 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**FAMD 8744S INDIAN HEALTH SERVICE-4WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**FAMD 8745S INDIAN HEALTH SERVICE - 5 WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8746S INDIAN HEALTH SERVICE-6WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 8748S INDIAN HEALTH SERVICE-(8WKS) 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**FAMD 895S ELECTIVE/FAMILY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 9090S FAMILY MEDICINE - ELECTIVE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 9092S FAMILY MEDICINE - 2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**FAMD 9093S FAMILY MEDICINE - 3WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 9094S Elective-Family Medicine 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 9095S FAMILY MEDICINE - 5 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 9096S FAMILY MEDICINE - 6 WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 9750S RESEARCH-FAMILY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD 9752S RESEARCH - FAMILY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**FAMD 9754S RESEARCH-FAMILY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**FAMD 9756S RESEARCH-FAMILY MEDICINE 6WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**FAMD S653S Principles-Aviation&Space Med 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**FAMD S664S Family Centered Maternity Care 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

## Forensic Criminalistic Analysis

### Courses

#### FCA 507S Gross Human Skeleton I 1.0 Credit

This course provides students with an in-depth familiarity with the gross human skeleton – its bones, their features, and how it develops. Through numerous laboratory exercises, students will be able to handle skeletal material in order to become proficient in the identification of human skeletal remains and differentiate them from those of non-human animals for application. This course focuses on the skull and dentition, whereas FCA-508 focuses on the post-cranial skeleton.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

#### FCA 508S Gross Human Skeleton II 0.0-3.0 Credits

Gross human skeleton is a study of the human skeletal system: its bones, their major parts and features, and development. Through lecture and hands-on laboratory examinations of human osteological material, students learn to identify the bones of the body quickly and be able to easily discriminate between human and non-human skeletal remains whether adult or immature. This course is a direct continuation of FCA-507 (Gross Human Skelton I), and deals with the post-cranial portion of the skeleton.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** FCA 507S [Min Grade: C] or MFSP 581S [Min Grade: C]

## Forensic Science

### Courses

#### MFSP 551S Human Function 3.0 Credits

This course is designed to provide students with an understanding of the functions and processes required to maintain the stable internal environment required for normal cell function. Several key themes will be examined throughout the course, including homeostasis and various feedback mechanisms. Each organ system of the body is examined from a physiological standpoint, building upon concepts illustrating how these systems are functionally integrated. This course is closely coordinated with MFSP-552S (Structure of the Human Body), to facilitate an understanding of physiology as it relates to human anatomy.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRSC or major is FS or major is IHS.

**MFSP 552S Structure of the Human Body 3.0 Credits**

This course is designed to provide students with a solid basis in human anatomy. The structural basis of the body's organ systems are examined and discussed – from the cellular to the tissue to the gross level. This course is closely coordinated with MFSP-551S (Human Function), enabling students who simultaneously matriculate into both to enjoy an integrated presentation of the structure and function of the human body. Anatomic complexes and key structural details of relevance to forensic science are discussed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRSC or major is FS or major is IHS.

**MFSP 553S Human Structure Lab 1.0 Credit**

The Human Structure lab enables students taking MFSP-522S (Structure of the Human Body) to examine human anatomical specimens including gross anatomical dissections and microscopic images. Structures of particular importance to the forensic professional are emphasized.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRSC or major is FS or major is IHS.

**MFSP 557S Drug Chemistry 2.0 Credits**

Review of the chemistry, biology and pharmacodynamic principles associated with forensic toxicology, with emphasis upon the forensic aspects of alcohol (ethanol), illicit drugs and selected prescription/over-the-counter pharmaceuticals. Separation techniques, means of drug identification and qualitative vs. confirmatory quantitative analytical procedures are discussed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRSC or major is FS or major is IHS.

**MFSP 585S Clinical Forensic Emergency Medicine and Traumatology 2.0 Credits**

This course bridges forensic techniques and knowledge to the care of living patients. Lectures and skills sessions will provide students with knowledge about abuse and injury as well as the forensic considerations of these patients when caring for them in the emergency department/trauma center. The course will also review the presentation and management of the trauma patient in the resuscitation area.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MFSP 588S Advanced Topics in Cell Biology 2.0 Credits**

This course covers advanced topics in cell biology by student presentations and discussions of journal articles covering current research in the field. In addition to presentations, students will write a paper reviewing one of the topics discussed during the course.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MFSP 603S Medical Toxicology 2.0 Credits**

The course provides an introduction to medical toxicology for students and offers an opportunity to engage in scholarly discussion of concepts, practices and medical language. The students will learn forensic emergency casework protocols including diagnostic and therapeutic assessment.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is FS.

## Histotechnology

### Courses

**MHPP 500S Advanced Histotechnology 4.0 Credits**

In depth study of routine and advanced techniques associated with the histology laboratory.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MSPA 540S

**MHPP 501S Anatomy for Histotechnologists 4.0 Credits**

Provides students with a comprehensive introduction to human gross anatomy. The structure of the human body is explained from a systematic standpoint with emphasis on how structures form complexes of clinical importance.

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MHPP 502S Histotechnology Capstone Project 3.0 Credits**

This course will give students the opportunity to integrate the theory and the practical experiences from the previous semesters. Students will investigate a new technology technique or current issue involving histotechnology and apply the knowledge and skills developed in courses and practicum to produce a paper or technical project that supports their position. This course is the culmination of the programs courses and the practicum and will be considered the official written comprehensive examination.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MSPA 540S

**MHPP 503S Histotechnology Practicum 9.0 Credits**

The clinical Practicum is designed to allow the students to apply knowledge and techniques learned during their didactic courses in a clinical hospital setting. It allows the student the opportunity to perform routine as well as specialized histotechnology techniques under the supervision of a qualified histotechnologist.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MSPA 540S and MSPA 520S and MSPA 590S and MLAS 545S and MHPP 500S and MSPA 580S and MHPP 502S

**MHPP T580S Special Topics in Histotechnology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Human & Molecular Genetics

### Courses

**GENE 895S GENETICS ELECTIVE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**GENE 9094S ELECTIVE - GENETICS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**GENE 9754S RESEARCH - HUMAN GENETICS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

## IMS Prog. Interdepartmental Sciences

### Courses

**IMSP 502S Medicine and Society 3.0 Credits**

IMS, MBS, and MMS program students take a Medicine & Society course in medical ethics. Issues having a broad social, ethical, and economic impact are selected for review and discussion. These include major research breakthroughs and technological innovations, ethical consideration of biomedical research, major ethical issues related to medicine, medical care delivery systems and their socio-economic impact, demographic changes in U.S. populations, world health issues, social expectations for health care professionals and related subjects. In a lecture format with small and large group discussions, students are presented topics relating to current issues that have a broad impact in the health sciences and health professions.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IMSP 506S Medical Professionalism and Leadership 3.0 Credits**

This course provides an understanding of the US health care environment that students studying to become future health care practitioners will be working in. It is designed to engage thoughtful discussions about the unique challenges and opportunities for the health care workforce of the future. Students will learn about the structure and components of the US health care delivery landscape; how that structure evolved and continues to change over time; what impact the political, economic / business, and legal climates will continue to have on the careers of health care professionals; and who and what influences how health care will be delivered.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IMSP 513S Medical Biochemistry 6.0 Credits**

This course is a study of the basic principles and regulatory processes governing the chemistry of life with a special emphasis on changes that occur as a result of a pathologic condition. The purpose of the course is to provide rigorous training in the biochemical systems and pathways needed to understand clinical medicine. The pace and content-level of the course is designed to be similar to that given to a first year medical student; in fact many of the large group lectures will be taken from an actual first year medical biochemistry course. We will compare and contrast normal biochemical pathways/systems to a wide variety of different pathologic conditions, ranging from lead poisoning to inherited metabolic disorders.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IMSP 522S Medical Physiology I 3.0 Credits**

This course is designed to provide you with the fundamental concepts in human physiology for your future as a healthcare professional. This information will be categorized into seven sections across two semesters. In the spring term Pulmonary, Gastrointestinal, Renal, and Reproductive Physiology will be covered. We will primarily focus on normal physiological function of the major human organ systems but will introduce pathophysiology when it reinforces or highlights a particular physiological mechanism. To accomplish our goal of helping you help yourself learn and integrate this material, we use various approaches including lectures, lecture notes, learning objectives, readings from textbooks and primary sources, group conferences, clinical case examples, and formal self-studies.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IMSP 523S Medical Physiology II 3.0 Credits**

This course is designed to provide you with the fundamental concepts in human physiology for your future career as a health professional. This information will be categorized into seven sections across two semesters. In the fall term Cell & Muscle Physiology, Endocrine Regulation of Body Systems, and Autonomic & Cardiovascular Physiology will be covered, and in the spring term Pulmonary, Gastrointestinal, Renal, and Reproductive Physiology will be covered. We will primarily focus on normal physiological function of the major human organ systems but will introduce pathophysiology when it reinforces or highlights a particular physiological mechanism. To accomplish our goal of helping you help yourself learn and integrate medical physiology, we use various approaches including lectures, lecture notes, etc.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IMSP 522S [Min Grade: C]

**IMSP 542S Medical Microanatomy I 4.0 Credits**

This course describes the tissues of the body with an emphasis on the structure of normal cells, their specializations and methods of acting together to form tissues and organs. The normal structure-function relationships at the subcellular, cellular and tissue levels are emphasized. This course provides students with a framework for recognizing and interpreting the changes seen in disease states.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IMSP 543S Medical Microanatomy II 2.0 Credits**

This course describes the tissues of the body with an emphasis on the structure of normal cells, their specializations and methods of acting together to form tissues and organs. The normal structure-function relationships at the subcellular, cellular and tissue levels are emphasized. This course provides students with a framework for recognizing and interpreting the changes seen in disease states.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IMSP 542S [Min Grade: C]

**IMSP 544S Medical Immunology I 2.5 Credits**

This course is designed to provide a foundation in the basic concepts of immunology and then illustrate the role of the immune system in clinical medicine. It commences with the important components (cells, tissues, antibodies, immunoglobulins, and cytokines) involved in regulation and host defense against infectious agents. Introductory lectures serve to describe and differentiate between innate mechanisms and adaptive immunity mediated by functional B and T lymphocytes and their products. B cell and T cell activation, regulation, and tolerance will be described. Cellular interactions between cells and the cytokines made by helper T cell subsets and other components of the immune system (B cells, CTL., NK cells, macrophages, eosinophils etc.) will be integrated.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IMSP 545S Medical Immunology II 1.5 Credit**

The Basic Immunology course is designed to provide a foundation in the basic concepts of immunology and then illustrate the role of the immune system in clinical medicine. It commences with the important components (cells, tissues, antibodies, immunoglobulins, and cytokines) involved in regulation and host defense against infectious agents. Introductory lectures serve to describe and differentiate between innate mechanisms and adaptive immunity mediated by functional B and T lymphocytes and their products. B cell and T cell activation, regulation, and tolerance will be described. Cellular interactions between cells and the cytokines made by helper T cell subsets and other components of the immune system (B cells, CTL., NK cells, macrophages, eosinophils etc.) will be integrated.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IMSP 544S

**IMSP 552S Medical Nutrition 1.0 Credit**

The goal of the course is to introduce some of the basic concepts of nutrition, to familiarize the student with the complexities of the issues with in-depth considerations of selected nutrients, and to consider the role of nutrition in a few clinical situations. This is intended to be a base upon which to build a more complete understanding of nutrition as topics with nutrition content arises formally and informally in the student's future. It is impossible even to introduce the entirety of the science of Nutrition in so short a time. Hence, a modest number of important topics have been chosen to be studied in detail, in the hope that if the student knows these well, the student will be able to deal more easily with the complexities of other areas.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IMSP 562S Medical Neuroanatomy 6.0 Credits**

This course will provide extensive information regarding structure and function relationships in the central nervous system. It will also provide introductory information on neurophysiology, cellular neuroscience and systems neuroscience topics.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IMSP T580S Special Topics in Interdepartmental Medical Science 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**IMSP T680S Special Topics in Interdepartmental Medical Science 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Interdepartmental

### Courses

**IDPT 500S Responsible Conduct of Research 2.0 Credits**

This two credit course is offered twice a year, one evening a week. It is presented using lecture, discussion and problem-based curriculum approaches, with associated required readings in texts. Some topics additionally require web-based exercises and quizzes. Graduate students, postdoctoral researchers and faculty discuss current issues of scientific integrity that all scientists encounter in their research. Solutions to hypothetical and real research challenges and ethical dilemmas are discussed and debated by trainees and faculty. Course sessions and discussions are led by a team of faculty leaders, including department head, deans and provosts. Grades are based on quizzes, class participation, web-based exercises, a term paper and a PowerPoint presentation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 4 credits



**IDPT 501S Biostatistics I 2.0 Credits**

Introduction to the theory of probability, frequency distribution, correlation's and regression analysis, probability, chi-square and analysis of variance, applications of statistics in the laboratory.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 9 times for 999 credits

**IDPT 502S Learn Early As Professionals I (LEAP I) 1.0 Credit**

LEAP (Learn Early As Professionals ) is the first part of a professional development program that extends throughout graduate education and training in the Division of Biomedical Science Programs. It is a required course for all first year graduate students in the Division of Biomedical Science Programs. LEAP covers topics that graduate faculty, senior graduate students, and postdocs feel are important for early graduate training and future professional success.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 2 credits

**IDPT 503S Searching Biomedical Literature 1.0 Credit**

This course surveys information sources in the library (books, journals, computer "finding tools"), with primary focus on finding biomedical journal articles via MEDLINE. Search planning is emphasized, including points on using Medical Subject Headings and precautions when searching title/abstract words. Resources for keeping up with the literature and maintaining personal files are briefly mentioned.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 504S Learn Early and Practice (LEAP II) 1.0 Credit**

LEAP II (Learn Early as Professionals II) is the second part of a formal, lecture-based professional development program. Professional development is part of the training offered in graduate education by the Division of Biomedical Science Programs. The objective of this course is to extend our discussions on topics in professional development for beginning scientists. These topics are critical for second semester graduate students as they transition through their first year of graduate school. This course covers topics that graduate faculty, senior graduate students, and postdocs feel are important for early graduate training and future professional success. Professional development is one of the core competencies required by all graduate students in the Division of Biomedical Sciences programs.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 2 credits

**IDPT 505S BIOMEDICAL RESEARCH 9.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 506S Biostatistics II 2.0 Credits**

Graduate Biostatistics II picks up where Biostatistics I leaves off. It teaches applications of commonly-used techniques in greater depth, with the intended audience being individuals who will be using statistics considerably in their work. This course includes one and two-way ANOVAs (and post hoc tests), multivariate techniques, power analysis, and other methods. The basic of the SPSS computer program is taught as well.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 507S Teaching Practicum I 1.0-4.0 Credit**

The goal of this practicum is to provide mentored teaching experiences for graduate students enrolled in the biomedical science programs of the COM. Graduate students in COM programs can meet practicum requirements in a variety of teaching venues including but not limited to tutoring, laboratory instruction, conferences, and lectures in medical school and graduate program-specific courses. Eligible teaching experiences also include instruction for high school and undergraduate students. Credits for each practicum will be awarded according to preparation time and contact hours. 1 credit hr = 16hrs of instruction.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 508S Teaching Practicum II 1.0-4.0 Credit**

The goal of this practicum is to provide mentored teaching experiences for graduate students enrolled in the biomedical science programs of the COM. Graduate students in COM programs can meet practicum requirements in a variety of teaching venues including but not limited to tutoring, laboratory instruction, conferences, and lectures in medical school and graduate program-specific courses. Eligible teaching experiences also include instruction for high school and undergraduate students. Credits for each practicum will be awarded according to preparation time and contact hours. 1 credit hr = 16hrs of instruction.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 509S Teaching Practicum III 1.0-4.0 Credit**

The goal of this practicum is to provide mentored teaching experiences for graduate students enrolled in the biomedical science programs of the COM. Graduate students in COM programs can meet practicum requirements in a variety of teaching venues including but not limited to tutoring, laboratory instruction, conferences, and lectures in medical school and graduate program-specific courses. Eligible teaching experiences also include instruction for high school and undergraduate students. Credits for each practicum will be awarded according to preparation time and contact hours. 1 credit hr = 16hrs of instruction.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 521S Molecular Structure and Metabolism 5.0 Credits**

Introduction to the fundamental concepts of biochemistry and molecular biology. Topics covered include the structure and function of biomolecules such as proteins, nucleic acids, carbohydrates, and lipids; enzymes; membrane transport phenomena; second messenger signaling; prokaryotic and eukaryotic DNA replication; transcription and translation; protein processing and trafficking; and intermediary metabolism.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 526S Cells to Systems 5.0 Credits**

Cells to Systems provides a foundation in cell biology, with topics in cytoskeleton, cell adhesion, membrane biology, endocytosis, intracellular signaling, cell cycle, cell growth (cancer), cell senescence, cell death (apoptosis), and genetic methodologies. A final section covers integrative topics on complex biological systems operating in intact organisms.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 532S SUMMER MAKE-UP MED BIOCHEM 7.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 550S Biochemistry and Biophysics 5.0 Credits**

This course includes the fundamentals of metabolism, enzymology, protein synthesis and structure, and molecular biology taught from neuroscience perspective. In addition, there are lectures on biophysics of ion channels, and neuronal circuits.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 600S Thesis Defense 9.0 Credits**

Students who have complete all course work and research requirements, but have not defended their thesis, may carry a status of "Registered for Thesis Defense Only". This registration carries no credit, has no fee and students receive no grade. Students may only be registered for thesis defense for no more than two semesters. Students may not be registered for this category if they are registered for any other graduate courses.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 9 times for 999 credits

**IDPT 601S Optional Rotation 4.0 Credits**

Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 7001S Professionalism in Medicine 1 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 7002S Professionalism in Medicine 2 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 7003S Professionalism in Medicine 3 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 7004S Professionalism in Medicine 4 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 703S HUMAN SEXUALITY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 9 times for 999 credits

**IDPT 706S PHYSICIAN AND PATIENT 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 710S PIL FALL SESSION 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 720S PIL WINTER SESSION 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 730S PIL SPRING SESSION 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 740S PIL SUMMER SESSION 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 750S PIL FALL SESSION II 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 751S INTR TO GERIATRICS/GERONTOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 752S INTRODUCTION TO AMBULATORY MEDICINE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 760S PIL WINTER SESSION II 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 770S PIL SPRING SESSION II 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 790S Spanish for Medical Professionals 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 800S Register for Degree Only 9.0 Credits**

This is a course designated to allow students who recently defended the opportunity to finish up any loose ends while maintaining the graduate student status. Students can only register for this course after they have defended their thesis.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IDPT 801S CLINICAL PRACTICE EXAM (S/U) 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 802S FOURTH YEAR RESEARCH COURSE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 821S INTERDEPT. ELECT.-NUTRITION 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 822S ACADEMIC ELECTIVE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 823S MD/MPH RESEARCH 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 824S MD/Ph.D RESEARCH 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 850S Literature Review Non-Thesis MS 4.0 Credits**

Literature Review of a specific topic directed at fulfillment of the degree requirement for a scholarly paper by non-thesis master's students. Progress is monitored by student's advisor and advisory committee.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 8 credits

**IDPT 901S CLINICAL EXAM PREP 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 990S INDEPENDENT STUDY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 991S INDEPENDENT STUDY 2 0.0 Credits**

**College/Department:** College of Medicine

**IDPT 992S INDEPENDENT STUDY 3 0.0 Credits**

**College/Department:** College of Medicine

**IDPT 997S SUMMER ENRICHMENT PROGRAM 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT 998S TERM ACTIVATOR 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**IDPT T580S Special Topics in Interdepartmental 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**IDPT T680S Special Topics in Interdepartmental 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**IDPT T780S Special Topics in Interdepartmental 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**IDPT T880S Special Topics in Interdepartmental 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**IDPT T980S Special Topics in Interdepartmental 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Interdisciplinary Health Science

### Courses

**IHS 500S Career Development in the Health Sciences Seminar I 1.0 Credit**

This is the first of two seminar courses that will expose students to a variety of professions in the healthcare field. Presentations will be conducted by professionals in their respective fields. Students will also participate in group research projects investigating different healthcare professions, with the goal of examining team-based healthcare.

This course will also examine effective tools to further professional development, and students will be required to complete an Individualized Development Plan (IDP).

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is IHS.

**IHS 501S Career Development in the Health Sciences Seminar II 1.0 Credit**

This is the second of two seminar courses that will expose students to a variety of professions in the healthcare field. Presentations will be conducted by professionals in their respective fields. Students will also participate in group research projects investigating different healthcare professions, with the goal of examining team-based healthcare. This course will also examine effective tools to further professional development, and students will be required to complete an Individualized Development Plan (IDP).

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IHS 500S [Min Grade: C]

**IHS 502S Neuropharmacology 3.0 Credits**

This course will introduce students to neurotransmitters and their role in nervous system function. Course readings and lectures will provide: Anatomy and physiology basic elements; drug research and treatment of nervous system disorders; and explore environmental factors that affect nervous system function.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 505S Healthcare in Spanish I 3.0 Credits**

This course will permit students with an existing knowledge of Spanish to develop a rich medical vocabulary through reading, writing and class discussions. Information regarding cultural subtleties and differences between various Hispanic subcultures will further enhance students' ability to communicate with Hispanic patients. Various public health & socio-political issues impacting the treatment & management of Hispanic patients will be examined & Hispanic healthcare scholars invited for selected guest lectures.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is IHS.

**IHS 506S Healthcare in Spanish II 3.0 Credits**

The course is designed to build cultural competency in numerous hispanic subcultures to assist future healthcare professionals in treating and interacting with patients of hispanic heritage. Course sessions will be conducted in spanish to further enhance students' communication skills with lecture and discussion emphasizing topics of significant interest to healthcare delivery and medicine.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IHS 505S [Min Grade: C]

**IHS 507S Initiating Biomedical Research 0.0-2.0 Credits**

Designed to assist students with the process of initiation biomedical research. Students will be provided with a structured series of steps which guide them in independently exploring and, ultimately, identifying a research topic and developing a sound research proposal in a logical, satisfying manner.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 508S MIHS Research Project 1.5 Credit**

Will involve student investigation of a biomedical research problem on a topic approved by the IHS Program Director in order to complete the research component for the research/journal paper graduation requirement. Acceptable topics may be based on library research; the analysis of retrospective clinical, laboratory, archival, or descriptive data.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IHS 507S [Min Grade: S]

**IHS 509S MIHS Research Paper 1.5 Credit**

Will assist students in organizing, writing, and preparing a 15-page double-spaced, typewritten document on a topic approved by the MIHS Program Director in order to meet the research journal paper graduation requirement.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IHS 508S [Min Grade: C]

**IHS 510S Introductory Biostatistics 3.0 Credits**

This web-based course is an introductory biostatistics course designed to focus on learning the statistical principles most often used in medicine and clinical research. Biostatistics has become increasingly important in clinical research and health care professionals participating in or directing research projects find knowledge about biostatistics indispensable.

When reading articles in medical journals, clinicians must understand biostatistics in order to decide whether they can believe the results presented in the literature, how the study results apply to patient care, or how to interpret information about drugs. Biostatistics covers the development and application of statistical techniques to clinical scientific research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 511S Biology of Cancer 3.0 Credits**

This course is a comprehensive overview of cancer, the goal is to provide students with general knowledge of cancer biology. Tumor development will be discussed as a multi-step process dependent upon changes of underlying molecular and cellular events. Additionally, the role of growth factors, oncogenes, and tumor suppressor genes will be included. Specific cell signaling pathways, cell cycle controls, and apoptosis resulting in metastasis will also be discussed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 512S Principles of Immunology 3.0 Credits**

This didactic course will acquaint you with fundamental concepts of the human immune system. First, we will introduce general features, such as innate and acquired immunity, and key players of the immune system (cellular and soluble). We will then study how these components interact to mount an immune response to various types of pathogens and illustrate mechanisms how this response is regulated. We will also discuss failures of these mechanisms, for example in immunodeficiency, hypersensitivity, cancer, and autoimmune disease. Further included is an overview of immune prophylaxis, COVID-19, and experimental systems and methods used to study immunology.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 513S Scientific Writing for Healthcare Professionals 2.0 Credits**

This course will introduce students to the basic guiding principles of scientific writing, and to the writing techniques necessary to effectively and efficiently communicate scientific information to professionals in the science and healthcare communities. Referencing, plagiarism, and the elements of science journal articles will also be discussed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 514S Molecular Biology & Biochemistry of the Cell 3.0 Credits**

Modern cell biology combines genetics, biochemistry, and molecular biology with traditional morphological descriptions to study how cells function at the molecular level. This course will introduce students to the dynamic relationships between the structure of cellular organelles and the numerous biochemical reactions that are necessary for cell growth, development, communication, motility, and survival with an emphasis on eukaryotic cells.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 515S Exploring Diversity in Healthcare 2.0 Credits**

In a face-to-face format, this course is designed to introduce students to diversity through the examination of beliefs and practices. Culturally competent healthcare workers can reduce disparities through the provision of unbiased care. Students will discover ways to engage and support diverse populations through self-awareness and critical thinking. Current initiatives that encourage diversity will be discussed along with the practical application of culturally competent skills. Students will participate in individual and group assignments to encourage the development of cultural competence. Each class will include a lecture, pertinent activity and dialogue.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 516S Strategic Communication and Professional Development 2.0 Credits**

The Strategic Communication and Professional Development course is a one semester long class to assist students in developing their academic and professional skills for careers and graduate student in the health sciences. The course will focus on graduate scholarship and interpersonal skill development.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 517S Biological Anthropology 3.0 Credits**

This course will examine human adaptation, evolution, and variation. We will discuss evolutionary theory, human genetics, and the evolution of genes. We will also look at the primate kingdom and investigate the living primates, looking at their behavior and evolution. We will learn about human biological diversity and delve into the origins and validity of the race concept. The last portion of the course will be devoted to an in-depth examination of human evolution, starting with the first primates and ending with our species, *Homo sapiens*.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 520S Molecular & Cellular Bases of Medicine 2.0 Credits**

In this course we will delve deeply into the basic molecular & cellular biology that underlies a number of diseases and therapeutic practice. The course will begin with a brief overview of fundamental molecular and cell biology concepts, and continue with a series of units, each focusing on the molecular and cell biological underpinnings of diseases or medical practices. The course will utilize exclusively online sources, including texts. Instructional modes will include live online, problem-based, and small group approaches. Students will be assessed via regular quizzes, group work, exams, and written presentations on specific applications of molecular and cell biology to biomedicine. Knowledge of college-level biology and chemistry will be assumed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 521S Neurophysiology of the Senses 4.0 Credits**

Neurophysiology of the Senses, is a semester#long, course designed to provide graduate students with a strong foundation in the broad discipline of neuroscience. It is the first in a three-course sequence that will introduce several key themes, such as the structure and function of the nervous system, neuro- and synaptic physiology, the major neurotransmitter systems, sensory physiology, motor systems, drugs and their actions, and neuropharmacology of neural systems.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MSPP 515S [Min Grade: C]

**IHS 522S Enhanced Laboratory Investigation I 2.0 Credits**

This course is designed to offer an enhanced research experience to students enrolled in the Laboratory Techniques concentration track of the Interdisciplinary Health Sciences (IHSP) Master's Program. Students will declare their interest in this track at the end of the year 1 Spring term. They will then use the summer semester between years 1 and 2 to develop and formulate their research interests with the help of the Program Director. During this time, students will also investigate potential research opportunities in local laboratories whose research interests parallel those of the student. By the end of the summer semester, students will have chosen a laboratory in which to work, and have begun the process of developing a research project with the primary investigator (PI) of the laboratory.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is IHS.

**Prerequisites:** IHS 500S [Min Grade: C] and IHS 501S [Min Grade: C] and MSPP 525S [Min Grade: C] and IHS 502S [Min Grade: C]

**Corequisites:** IHS 507S, IHS 508S

**IHS 523S Enhanced Laboratory Investigation II 2.0 Credits**

Enhanced Laboratory Investigation I (ELI II) is the second of two courses designed to provide an enhanced laboratory research experience for students interested in pursuing this career option. Successful completion of this course is a requirement for the Laboratory Techniques concentration track of the Interdisciplinary Health Sciences Program (IHSP) Master's degree from Drexel University, College of Medicine. Students will work closely with a Principal Investigator to complete a 1 year hypothesis-driven research project.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is IHS.

**Prerequisites:** IHS 500S [Min Grade: C] and IHS 501S [Min Grade: C] and MSPP 525S [Min Grade: C] and IHS 502S [Min Grade: C] and IHS 522S [Min Grade: C]

**Corequisites:** IHS 507S, IHS 508S

**IHS 525S Human Nutrition 3.0 Credits**

This online course presents the concepts and rationale of nutrition in the context of personal, cultural and world aspects of human nutrition. Students will examine roles of nutrients in health and disease, digestion, diets, eating disorders, and other topics related to nutrition and life cycle stages. While the course has no prerequisites, the scientific rationale is developed with a minimum of assumptions and scientific terminology.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS 900S Registered for Degree Only 0.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**IHS T580S Special Topics in Interdisciplinary Health Science 1.0-10.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Law

### Courses

**LAW 514S Banking and Finance Law and Regulation 3.0 Credits**

A significant sector of the legal profession provides advice to the banking industry, to government regulators, and, of course, to individuals, corporations and other institutions in connection with banking transactions. This course will provide an introduction to the regulatory environment of the banking industry and the roles of bank regulators and central banks. Attention will be given to systematic risk and the response to that risk by way of prudential regulation, including capital and liquidity requirements. The financial crisis of 2007-8 and previous regulatory failures will be examined as will the legislative steps taken by governments to reduce risks of bank failure.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 515S Ethics and Social Responsibility: The Lawyer as Ethical Gatekeeper 3.0 Credits**

We will examine, through cases, problems, discussions and readings, issues of ethics and social responsibility that arise in real life contexts and decide what principles to apply to ethical problems. Lawyers have a special responsibility in both the public and private sectors to ensure ethical behavior and to establish systems for preventing unethical behavior. Issues of concern to lawyers will be integrated into each class discussion. Particular focus will be given to the nexus between law and ethics. Another part of the course will be devoted to a study of professional values and responsibility and legal ethics. Running throughout the course is the theme of the lawyer as ethical gatekeeper.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 516S Foreign and Domestic Investment in Africa's Natural Resources: Law, Policy, and Sustainability 3.0 Credits**

Foreign and domestic investment in extractive and other natural resource industries in Africa can contribute significantly to national development through tax revenue, transfer of capital and technology, job creation, linkages with local industries, infrastructure development, community development and the elimination of poverty. At the same time, the history of natural resource development in Africa sends up a warning signal that these benefits do not come without careful planning and without careful drafting. Governments need carefully crafted policies and regulatory and legal frameworks for natural resource development. Parties to natural resource agreements need skilled negotiators to achieve their goals. This course will give students the skills they need to develop these frameworks.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 517S International Commercial Arbitration 3.0 Credits**

The purpose of this course is to provide an understanding of the history, process, and intricacies of international commercial arbitration. This course is especially interested in examining the practical realities faced by lawyers as they navigate the complex world of international arbitration on behalf of their clients. While the course provides basic history and context to situate international commercial arbitration in the proper legal framework, the course topics, which range from drafting arbitration agreements to enforcement of awards, are aimed at providing concrete strategies for practitioners or future practitioners in this field.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 518S International Trade and Investment: Practice and Law 3.0 Credits**

Transnational trade and investment is a major and growing phenomenon in the 21st century. This course will examine the legal and regulatory frameworks of transnational trade and investment, with particular attention to developing regions in Asia, Latin America and most especially in Africa.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 520S Project Finance for Infrastructure Development in Africa 3.0 Credits**

Finding a means of financing major infrastructure projects is a key to the project's ultimate success in Africa and elsewhere. "Project finance" is a favored means of enabling governments of emerging market countries and others across the world to build roads, ports and airports; provide power to their people; exploit natural resources; build medical facilities; and finance a myriad of other public works. We will examine how infrastructure projects are structured and negotiated and how related risks are allocated and mitigated. We will examine the ways in which major projects are financed, focusing on the key legal features of the financing and the various parties who bring infrastructure projects to life.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 550S Torts 3.0-5.0 Credits**

This course examines the general theories of civil liability for injuries to persons or property. Topics include liability for intentional misconduct, an introduction to the law of negligence, and a strict liability as well as defenses to claims of tort liability.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 552S Contracts 3.0-5.0 Credits**

This course examines the enforcement of promises and bargains. Topics include contract formation, the doctrine of consideration, formalities including the Statute of Frauds and the parol evidence rule, performance and breach, defenses, remedies.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 554S Civil Procedure 3.0-5.0 Credits**

This course examines the civil litigation process with an emphasis on the federal courts. Topics include remedies, pleadings, pre-trial motion practice, discovery, motions for summary judgment, trial procedure, appellate review, and issue and claim preclusion.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 555S Legislation and Regulation 3.0 Credits**

This course is intended to introduce the student to lawmaking through statutes and agency regulation in the modern regulatory state. The course will examine the reasons why we have developed into a regulatory state. It will consider the roles and relationships of Congress and administrative agencies within the three branches of government. It will look at how statutes are created and passed. The course is also designed to provide the student with an introduction to the theory and practice of statutory interpretation, including how to read and understand a statute. In addition, the course will introduce students to how agencies create and enforce regulation, including some of the requirements placed on agencies by the Administrative Procedures Act, and the judicial review of regulations.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 556S Property 3.0-5.0 Credits**

This course examines the basic elements of the law of real and personal property. Topics include ownership and possession of property, gifts, the rights of bona fide purchasers, adverse possession, estates and future interests in real property, and co-ownership and concurrent interests.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 558S Criminal Law 3.0-5.0 Credits**

This course examines the principles that underlie liability for criminal conduct. Topics include the definition of crimes and the principles of punishment, the required acts and mental states necessary for liability, and defenses to and justifications for conduct. Specific crimes will be discussed including conspiracy and intentional murder and manslaughter.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 560S Constitutional Law 3.0-5.0 Credits**

This course examines the basic issues in federal constitutional law. Topics include the role of the courts in interpretation of the Constitution, the scope of legislative and executive powers, the limitation of the powers of state and local governments, and an introduction to concepts of equal protection.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 565S Legal Methods I 2.0-4.0 Credits**

This course provides instruction in the fundamentals of predictive writing and legal research, including LEXIS and Westlaw training.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 566S Legal Methods II 2.0-4.0 Credits**

This course continues Legal Methods I. Students will learn additional legal research skills and will be introduced to persuasive writing techniques.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 565S

**LAW 568S Intro to Interviewing, Counseling, and Negotiations 1.0 Credit**

This course develops the practical lawyering skills of interviewing and counseling. Students will also be introduced to negotiation theory and practice.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 600S Constitutional Law II 3.0 Credits**

This course covers issues in substantive and procedural due process and equal protection under the law. It also introduces issues related to personal rights, as embodied by the First Amendment.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 602S First Amendment 3.0-4.0 Credits**

This course examines speech and religion clauses of the First Amendment. It considers the philosophical and historical foundation of free expression; analytical problems in First Amendment jurisprudence; and the relationships between free exercise of religion and the separation of church and state.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 603S Media Law 2.0-3.0 Credits**

This course will consider media law and the practical implications of representing media clients. Topics will include: who is "the media" in a digital age; statutory and constitutional protections; prior restraints and criminal liability; civil liability arising out of publication (including defamation and other tort liability); problems of newsgathering; reporter's privilege; and advising the media client.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 604S Advanced Constitutional Law 3.0-4.0 Credits**

This course takes an in depth look at individual rights under the Constitution with a particular emphasis on substantive and procedural due process and equal protection under the law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 605S Constitutional Theory 3.0 Credits**

This course covers central issues in constitutional theory and practice, principally as they have arisen in the United States. Topics include the nature of constitutionalism; theories of constitutional interpretation; the use of history and narrative in constitutional argument; theories of constitutional change; the relationship between constitutional adjudication, democratic politics, and social movements; the significance of constitutional culture; the roles played by executive, legislative, and judicial actors; questions of constitutional legitimacy; and circumstances giving rise to constitutional dysfunction or crises. The course will explore these topics in the context of specific issues arising historically and in recent years.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 560S [Min Grade: D]

**LAW 606S Civil Rights Law 2.0-3.0 Credits**

This course explores the principles of civil rights law and practice. It will also review both the history and current development of this area of law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 608S Marshall-Brennan Constitutional Lit Sem 1.0-2.0 Credit**

This is the required companion course for students participating in the Marshall-Brennan Constitutional Literacy Project. It is designed to prepare law students to teach constitutional law in local high schools and to supervise these high school students as they compete in regional and national constitutional moot court competitions.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 610S Reproductive Rights & Justice 2.0-3.0 Credits**

Most people know about reproductive rights because of abortion's prominence in American politics. Fewer people know about reproductive justice, a different framework for similar issues that explores how systemic oppression impacts all aspects of reproductive decision-making. This approach centers social, racial, and economic justice and focuses as much on a person's rights to have and raise children as it does on their right to not have them through access to safe and legal abortion care and contraceptive access. This course will focus on several major topics within both reproductive rights and justice: contraception, sterilization, abortion, pregnancy discrimination, assisted reproductive technology, and more.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 611S Sex, Gender, & the Law 2.0-3.0 Credits**

This course will explore the law and theory of sex and gender. Looking to a wide variety of legal doctrines and theorists, students will gain an understanding of how the law was developed, where it is going, and what it should be. The course will also address other identity characteristics and how they intersect with sex and gender.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 612S Sexual Orientation and the Law 2.0-3.0 Credits**

The course will focus on the interaction between sexual orientation and the law. Students will study how the transformation of social attitudes around sexual orientation plays out in various doctrinal areas.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 614S Supreme Court Seminar 3.0 Credits**

This seminar will introduce students to the history and function of the United States Supreme Court. Students will study several active cases, draft simulated Supreme Court opinions, and practice oral argument. Where possible, students will actually attend one day of Supreme Court argument.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit



**LAW 620S Administrative Law 3.0-4.0 Credits**

This course studies the law governing administrative agencies in the task of carrying out governmental programs; interrelations of legislative, executive and judicial agencies in development of public policy; decision-making processes and internal procedures of administrative agencies, and legislative, executive, and judicial controls on them.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 621S Federal Courts 3.0 Credits**

This course considers the constitutional, statutory, and judicial rules that determine whether a case is tried in state or federal court.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 622S Employment Discrimination 3.0 Credits**

This course studies the federal and state statutes and case law that prohibit employment discrimination on the basis of race, color, gender, religion, national origin, age, disability, and sexual orientation. This course covers substantially different material than Employment Law and students may productively take both courses.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 623S Election Law 3.0-4.0 Credits**

This course considers the ways in which state and federal law regulate elections and the political process. Students will gain a perspective on both practical aspects of election regulation and the power relationships that motivate these rules.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 624S Environmental Law 3.0 Credits**

This course surveys the federal and state statutes and regulatory programs which attempt to limit water pollution, air pollution, environmental degradation, species extinction, hazardous waste, and chemical regulation problems.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 625S Energy Law 2.0 Credits**

This course will provide an overview of energy law. Topics will include: (1) an overview of U.S. energy policy; (2) introduction to Administrative Law and Regulatory Economics; (3) public utility regulation and deregulation; (4) preemption; (5) climate change; (6) electricity; (7) traditional fossil fuels: coal and oil; (8) nuclear power; (9) natural gas and the Marcellus Shale; (10) renewable energy; (11) conservation and storage; (12) oil and gas law; and (13) developing a revised U.S. energy policy.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 626S Animal Law 2.0 Credits**

This course will encourage students to consider the philosophical and jurisprudential bases for the current status of animals in our legal system. The course will examine both the history of, and future trends regarding, that status.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 627S Admiralty Law 2.0 Credits**

This is an introductory level course covering basic principles including sources of maritime law, federal and state law jurisdiction over maritime claims, special maritime remedies (arrest and attachment), carriage of goods by sea, maritime torts (collisions, allisions, pollution, personal injury claims, seamen's rights/remedies), maritime contract disputes and liens, and marine insurance. The course will cover these subjects from both a historic and pragmatic perspective.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 628S Civil Litigation Remedies 2.0-3.0 Credits**

This course will help students gain an understanding of the law and policies relating to equitable remedies (specific performance and injunctions), damages at common law (compensatory and punitive damages), and restitution.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 630S Class Actions/Other Complex Litigation 3.0 Credits**

This course builds on the first year civil procedure course by examining the rules and practice that apply in sophisticated litigation settings. Students will learn about representative (class) actions; how to address related cases pending in different courts and other case management issues; the application of claim and issue preclusion principles; and other issues often faced in complex litigation. The course will cover a number of recent Supreme Court cases affecting civil procedure and will provide students with the working knowledge of the procedures they will likely need in cases of any significance.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 632S Conflict of Laws 3.0 Credits**

The course focuses on cases involving multi-jurisdictional elements. Three primary areas are covered: choice of the law approaches; enforcement in a forum of judgments rendered in another state; and jurisdiction over an out-of-state party. Both relationships among American states and issues involving state and federal law are addressed.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 634S Evidence 3.0-4.0 Credits**

This course studies the law governing proof of disputed factual matters in criminal and civil trials, including issues of relevancy, competency, hearsay, and other exclusionary rules, and the privilege of witnesses.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 636S Legislation 2.0-4.0 Credits**

This course examines theories of legislative behavior, beginning with an examination of the process by which statutes are generated. It then considers theories of representation and interpretation and their implications for issues that arise in the implementation of statutes.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 637S Advanced Evidence 2.0-3.0 Credits**

This course will provide in-depth investigation of evidentiary issues relevant to trial lawyers.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 634S [Min Grade: D]

**LAW 638S State and Local Government Law 2.0-3.0 Credits**

This course examines state and local governments, their role in setting public policy, and the interrelationship between them. Areas to be explored may include forms and structures of state and local governments, selection of public services, taxing and spending powers, home rule, zoning law, and general powers and immunities.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 639S National Security Law 3.0 Credits**

This course will examine the legal frameworks governing the use of national security powers by the U.S. government. It will explore the exercise of military force, the structures of the law enforcement and intelligence communities, and the legality of counterterrorism-related activities.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 640S Education Law 2.0-3.0 Credits**

This course will cover constitutional and statutory law and policy issues relating to public schools, including rights of parents, teachers and students, school discipline, religion, speech, discrimination, and disability rights.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 642S Special Education Law 2.0-3.0 Credits**

This class considers the law governing education of students with disabilities, with a particular focus on the Individuals With Disabilities Education Act (IDEA). Students will study the evaluation and planning process, procedural due process provisions, substantive issues such as use of least restrictive environment and school discipline, and remedies under the law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 643S Children and the Law 2.0-3.0 Credits**

This course examines the relationship between children, family and the state.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 644S Family Law 3.0-4.0 Credits**

This course will examine the legal and policy issues relating to the family. Topics will include marriage, including barrier to marriage and the legal relationships between spouses; parents and children; divorce and its incidents, including child support and custody, and jurisdictional issues.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 645S Pennsylvania Family Law Practice 2.0 Credits**

The course will teach students the practical side of practicing family law in Pennsylvania from the initial client contact through final dissolution of the marriage or custody issues and will cover the essentials of divorce, equitable distribution, child support, alimony pendente lite, alimony, custody and special relief. Students will be divided into groups of "Plaintiff's Attorney" and "Defendant's Attorney" and will learn and be expected to determine strategy in equitable distribution, support and custody and be able to perform support calculations and spot issues related to these matters.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 646S Mediation and Arbitration 2.0-3.0 Credits**

This course explores the theory, practice and law of mediation and arbitration, with an emphasis on the roles lawyers play in these processes. The course will include simulated mediations and arbitrations to foster a deeper understanding of the material and to develop lawyering skills in resolving disputes without litigation.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 647S The Rights of Children 2.0 Credits**

This interdisciplinary course is focused on looking critically at our treatment of children and reimagining children's rights from conception to adulthood. Over the semester, students will engage a wide-range of issues in criminal law, education law, tax law, environmental law, and family law, among other areas. Each week the class will take up a bold idea for discussion: What if children were allowed to vote? What if there was no inheritance? What if we required everyone to take time off to care for others? Throughout the term, students will work on a research paper on a topic of their choosing.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 648S Representing the Regulated Client 2.0 Credits**

Using a practical approach, this course will cover the complex issues involved in representing clients who are subject to administrative regulation. Although it addresses issues relevant to a wide variety of regulated clients, it will have a particular focus on environmental regulation matters.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 650S Regulation Seminar 2.0-3.0 Credits**

This seminar considers why we regulate and ways in which to make existing regulation more effective. Students review and critique the dominant economic regulation paradigm as well as other theories of regulation based on mortality and risk. It concludes with an investigation of the role of politics in regulation.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 652S Pennsylvania Practice 2.0-3.0 Credits**

This course develops a student's practical understanding of how the Pennsylvania Rules of Civil Procedure govern civil litigation including case initiation, discovery, motion practice and pre-trial preparation. The goal of the course is to prepare a student to work as a first year associate in a civil litigation law firm.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 653S Entrepreneurial Law Clinic Seminar 1.0 Credit**

The Entrepreneurial Law Clinic Seminar will meet once a week, allowing participants in the Clinic to discuss various issues they encounter in their work in a seminar setting.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 2 times for 2 credits

**Prerequisites:** LAW 713S

**Corequisite:** LAW 924S

**LAW 654S Lawyering Practice Seminar 2.0 Credits**

This seminar focuses on learning from experiences, both in the Co-op and in later professional practice. Students will study the roles being played by lawyers and the institutions where lawyers work. They will discuss their fieldwork experiences, make formal class presentations, and listen to practicing attorneys. Enrollment is by permission only.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 655S Lawyering Practice Seminar II 1.0 Credit**

This is a professionalism course designed to support students' second co-op experience as they continue to build skills and develop professional identity. Students will continue to focus on the study of lawyers and their roles and obligations within the context of their co-op and later professional practice. Course meetings will revolve around student presentations, engagement with practicing attorneys and developing a professional development plan and personal writing portfolio.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 654S

**LAW 656S Justice Lawyering Sem 1.0-3.0 Credit**

This course, which is a co-requisite of the field clinics, is a critical look at law and social justice.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 2 times for 3 credits

**LAW 657S Contemplative Lawyering 2.0 Credits**

Contemplative Lawyering is course about ethics and wellbeing, both personal and professional. Through readings, podcasts, journaling, and in-class discussion, you will learn how ethics and well-being are inextricably related. You will also learn mindfulness practices, both "sitting" and "portable," that help support the cultivation of ethics and well-being. At the end of the course you will have a new set of tools to help you move forward into your life as a practicing lawyer in a healthier, more ethical, more easeful way.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 658S Labor Law 3.0 Credits**

This course focuses on the laws governing collective bargaining by unions and employees, and the laws regularity the relationship between individuals and their unions.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 660S E-Discovery & Digital Evidence 2.0 Credits**

This course intends to prepare law students for modern-day litigation practice, which has become increasingly dependent on the understanding and use of technology. Doctrinally, this course covers the identification, preservation, collection, review, and production of electronically stored information ("ESI") in civil litigation. Practically, this course covers the organization, use and presentation of ESI from the very beginning of the case through trial preparation.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 670S Criminal Procedure: Investigations 3.0 Credits**

This course considers the Fourth Amendment's protection against unreasonable search and seizure, the Fifth Amendment's right to Due Process and against compulsory self-incriminations, and the Sixth Amendment's right to counsel, all with particular emphasis on the application of these constitutional provisions within the context of criminal investigation.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 671S Criminal Procedure: Prosecution & Adjudication 3.0 Credits**

This course will study the basic rules of criminal procedure, beginning with the institution of formal proceedings. It will emphasize prosecutorial discretion, preliminary hearings, the grand jury, criminal discovery, guilty pleas and plea bargaining, jury selection, pretrial publicity, double jeopardy, the right to counsel, and pretrial release and sentencing.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 672S Sentencing Law 2.0-3.0 Credits**

This course examines theories of sentencing, sentencing regimes, use of guidelines, and constitutional limits on sentencing.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 673S Crime and Community 2.0 Credits**

In this course, students will study how various communities are affected by crime and criminal justice policies. Issues that may be considered include the war on drugs, large-scale incarceration, and sexual offender regulations.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAW.

**LAW 674S Health Care Fraud and Abuse 2.0-3.0 Credits**

This course examines the major federal and state legislation for providers who seek reimbursement under governmentally funded health care programs including the Medicare and Medicaid Anti-Kickback statute, the False Claims Act, and the Stark I and Stark II legislation and regulations.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 675S Federal Criminal Law 2.0-3.0 Credits**

This is a broad survey course on current federal criminal law and practice. Students will become familiar with a wide range of federal criminal statutes, theories of criminal liability and culpability, federal sentencing law, federal jurisdictional issues, and federal practice from the investigative through trial stages.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 676S White Collar Crime 2.0-3.0 Credits**

This class will present an overview of white collar criminal litigation. The course will emphasize federal law and focus on liability for corporations and corporate executives, fraud, obstruction of justice, and related matters.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 678S Juvenile Justice Law 2.0-3.0 Credits**

This course will conduct an in-depth study of juvenile justice jurisprudence, doctrine, and policy in the United States. It will consider particular constitutional issues as they relate to children in the juvenile justice system. It will also consider the major differences between the criminal justice and the juvenile justice systems.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 680S Death Penalty Law 2.0-3.0 Credits**

This course will focus on the substantive and procedural issues presented in cases where prosecutors seek the death penalty. It will also consider the legal issues arising in collateral challenges to death sentences, particularly through the Federal habeas corpus process.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 682S Criminal & Civil Rights Litigation Strategies 2.0 Credits**

This advanced litigation course is designed to train students in how to create a strategy for handling a criminal or civil rights matter. Students will begin with substantial factual material. With this base, they will move through the processes of developing a case theory, designing an investigation and discovery strategy, targeting relevant court motions, and preparation of the case for trial.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 670S [Min Grade: D] and LAW 634S [Min Grade: D]

**LAW 700S Business Organizations 3.0-4.0 Credits**

This class studies the legal attributes of corporations, partnerships, and limited liability companies. It examines the rights, duties and liabilities of managers, owners, and agents. It also focuses on formation issues, operational powers and fundamental changes in business forms such as dissolution, merger, or acquisition.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 701S Federal Income Tax 3.0-4.0 Credits**

This course is intended to give students an understanding of the fundamental legal and policy concepts underlying the federal individual income tax. The course will focus on the statutory framework of U.S. tax laws, particular judicial authorities, and selected Treasury Department regulations and rulings.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 702S Enterprise Tax 3.0-4.0 Credits**

This course will survey the differing federal income tax treatments of the various forms of business and investment activities, including both corporations and partnerships.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 701S

**LAW 704S Corporate Finance 2.0-3.0 Credits**

This course is designed to familiarize law students with the principles of corporate finance. In the world of corporate finance, the distinction between lawyers and investment bankers has blurred. Whether issuing new securities, taking a firm public via an IPO or securing a credit facility, corporate lawyers and investment bankers work side-by-side. Lawyers without an appreciation of corporate finance are at a distinct disadvantage. This course will provide the framework of these types of financings and offer students chances to test their knowledge with a series of simulated transactions during the course of the semester.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 706S Secured Transactions 3.0 Credits**

This course provides an introduction to the law governing contractually created interest on personal property used to secure payment or performance of obligations. Students will study the creation, perfection, priority, and enforcement of security interests in personal property under Article 9 of the Uniform Commercial Code.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 708S Payment Systems 3.0 Credits**

This course introduces the student to the law of negotiable instruments, primarily checks and promissory notes. The course focuses on Articles 3 (Negotiable Instruments) and 4 (Bank Deposits and Collections) of the Uniform Commercial Code.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 710S Bankruptcy 3.0-4.0 Credits**

This course will examine both state law remedies and priorities and the federal Bankruptcy Code. Topics will include elements common to all bankruptcies, as well as Chapter 7 liquidations in the consumer context, and Chapter 8 and 13 wage-earner payout plans.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 711S Sales 3.0 Credits**

This course reviews contract formation issues from the perspective of Uniform Commercial Code Article 2 and focuses on significant commercial contractual issues such as formation, performance (delivery and payment), title to goods, third party rights, warranty, and remedies.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 712S Private Equity and Venture Capital Law 2.0-3.0 Credits**

This course examines the legal and financial aspects of venture capital and private equity transactions. Subjects include venture capital financing, leveraged buyout transactions, management equity incentive structures, and related tax topics. Students will also be introduced to the venture capital and private equity fund industry.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 700S

**LAW 713S Transactional Lawyering 4.0-5.0 Credits**

This hands-on skills course places students in the role of dealmakers. Students must anticipate legal problems and create agreements that avoid those pitfalls.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 700S [Min Grade: D]

**LAW 714S Securities Regulation 3.0 Credits**

This course examines securities market regulation, including registration, exemption, and remedies under the Securities Act of 1933; reporting and accounting standards under the 1934 Act; the proxy system; and the regulation of broker-dealers, specialists, and self-regulatory organizations.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 715S Mergers and Acquisitions 3.0 Credits**

This is an upper-level simulation course designed to familiarize the student with mergers and acquisitions practice. In a series of five exercises, students will work as teams to draft, mark-up and negotiate the provisions of an acquisition agreement. The course provides an opportunity to develop drafting, client counseling, negotiation and deal structuring skills while exposing students to the various substantive legal doctrine that impact a hypothetical cross-border leveraged buyout transaction.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 700S [Min Grade: D]

**LAW 716S Antitrust 3.0 Credits**

This course focuses on antitrust law, with emphasis on how modern technology might challenge traditional antitrust principles. Topics include Rules of Reason vs. per se analysis, monopolies, mergers, joint ventures, tying arrangements, exclusive dealing, predatory pricing, and other business behaviors that have arisen in a variety of industries and markets.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 718S E-Commerce 2.0-3.0 Credits**

The advent of the Internet and the integration of electronic technologies into business has had an enormous impact on the way that commerce is carried out. This course will examine the legal challenges faced by businesses as they migrate to an electronic environment, and the extent to which the law must adapt to the changing landscape.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 722S Employment Law 3.0 Credits**

This course studies the law regulating the employer-employee relationship. Topics include the process of establishing employment, and its terms; employers legal obligation to employees; termination; and compliance with existing regulatory regime.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 724S Nonprofit Organizations 2.0-3.0 Credits**

This course will provide an overview of the legal environment of nonprofit organizations. Emphasis will be upon examining the law as it affects various aspects of nonprofits including incorporation, governance, fundraising and solicitation, employment, political activities, and tax status. Students will learn how the law regulates and structures nonprofit entities.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 726S Sports Law 2.0-3.0 Credits**

This course will involve application of various legal doctrines (including contracts, labor, antitrust, intellectual property, tax, torts, remedies, arbitration and constitutional law) to a broad range of sports-related activities.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 728S Entertainment Law 2.0-3.0 Credits**

The course will provide an overview of legal issues arising in the entertainment industry. Topics include acquisition of rights, talent agreements, project financing and structures, and distributor and licensing agreements. The course will also survey contracts, business organizations, securities, labor, copyright, trademark and rights of privacy/publicity law impacting the entertainment industry.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 730S Legal Regulation of Global Financial Crimes 3.0 Credits**

This course covers a broad scope of global financial crimes and their intersection with the US financial system. Students will learn about a variety of types of financial crimes; what laws and regulations come into play; which regulators enforce them; the consequences for individuals and financial institutions who enable such crimes (whether intentionally or otherwise); the latest data breach issues, laws, and regulations (including GLBA, GDPR, and others); and how current events, politics, and technological advances intersect with these criminal enterprises.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 731S Workers Compensation 2.0 Credits**

This course will address the history, statutory construction, and evolving nature of workers compensation law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 733S Employee Benefits Law 2.0-3.0 Credits**

This course considers the legal, economic, and social welfare aspects of benefits provided through an individual's ties to the employment market. The course will consider mandatory benefit regimes in which all employers and employees must participate, such as Social Security and Medicare; and voluntary benefit programs, which employers may choose to adopt or not adopt for their employees.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 734S Legal Regulation of Investment Advisers 3.0 Credits**

This course will thoroughly review the Investment Advisers Act of 1940 and how it laid the foundation for present day regulation. It will explore the various legal and regulatory schemes that govern investment companies and look at the key policies that drive them.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 735S Legal Regulation of Investment Companies 3.0 Credits**

This course will thoroughly review the Investment Company Act of 1940 and how it laid the foundation for present day regulation. It will explore the various legal and regulatory schemes that govern investment companies and look at the key policies that drive them.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 736S Broker/Dealer Regulation 3.0 Credits**

This course will discuss the legal and regulatory frameworks that govern broker-dealers. It will explore the multiple legal and regulatory regimes that govern broker dealers and affiliated institutions.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 737S Banking Law 3.0 Credits**

This course will explore the development of banking law and how that development shapes our current banking regulatory regime. It will also compare the US banking regulatory scheme comprised of state and federal bodies with the more uniform systems operating in many foreign jurisdictions.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 740S Trusts and Estates 3.0-4.0 Credits**

This course will survey the law of gratuitous transfers and inheritance. The class will cover the creation, execution, alteration and interpretation of wills as well as the creation, revocation and interpretation of trusts and trust instruments of various types.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 741S Estate Planning 2.0 Credits**

This class will introduce students to the fundamental principles and objectives of estate planning. With these fundamentals, the course will then examine the basic tools and techniques used in planning an estate to meet the needs of an individual or married couple, such as wills, various types of trusts, and lifetime gift giving. Probate of an estate, durable power of attorneys, guardianships, and planning for other life situations will also be explored.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 740S [Min Grade: D]

**LAW 742S Real Estate Transactions 2.0-3.0 Credits**

This upper-level property course studies the legal aspects of residential and commercial real estate sales, development and finance.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 746S Land Use Law 2.0-3.0 Credits**

This course studies the principal methods of public control of private land use. It will consider issues relating to nuisance, eminent domain, taxation and zoning.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 760S Copyright 3.0 Credits**

This course surveys the law of copyright. Topics to be discussed include the subject matter of copyright; ownership and transfer of copyrights; the rights afforded to copyright owners; duration of copyright rights; infringement; and remedies. Related areas of law such as author's moral rights, unfair competition, and contractual protection.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 761S Patents 3.0 Credits**

This course provides an introduction to patent law, focusing upon the requirements of patentability (patentable subject matter, utility, novelty and non-obviousness), infringement, and defenses to infringement. Other topics include the economics of information and innovation competition, claims drafting, licensing, patent misuse and antitrust violations.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 762S Patent Prosecution 2.0 Credits**

This course focuses on drafting patents, strategy and tactics before the United States Patent and Trademark Office, and standards for patentability in the context of business effectiveness and ethical requirements.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 761S [Min Grade: D] (Can be taken Concurrently)

**LAW 763S Patent Litigation & Strategy 2.0-3.0 Credits**

This course will delve more deeply into the questions of patentability, infringement, licenses, and assignments. Also, it will focus on the special aspects of patent litigation arising from its technical nature.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 761S [Min Grade: D]

**LAW 764S Trademarks & Unfair Competition 3.0 Credits**

This course analyzes the law of unfair commercial practices. It covers trademarks, service marks, trade names, trade dress, infringement, interference with contractual relationships, appropriation of intellectual property created by another, defamation, disparagement, false advertising, unfair methods of competition, unfair or deceptive acts or practices, and remedies.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 765S Essentials of Intellectual Property Law 3.0 Credits**

The purpose of this course is to provide an overview of intellectual property for those preparing to be civil or criminal attorneys who do not specialize in the field. Over the past century, the creation of new solutions and content has become a primary foundation of the U.S. economy. As such, it has become integral to the practice of business law. Some types of protection, including anti-hacking legislation, trade secrets, copyright, and trademark law, are becoming increasingly important in criminal law as well. Those interested in technology and business law will benefit from this foundational course that outlines the basics of intellectual property law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 768S Internet Law 2.0-3.0 Credits**

This course addresses a variety of legal issues that relate to the Internet. Areas covered include intellectual property, electronic privacy, constitutional rights, and commercial law issues.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 770S European Union Data Privacy and Protection 3.0 Credits**

This course explores the law governing information privacy, data protection, and data security in the European Union. Topics may include an introduction to the EU Data Protection Directive and the new General Data Protection Regulation (2018), the Data Protection Authorities and cybersecurity in Europe. Students will also explore the so-called "Right to Be Forgotten," and how EU law affects US companies doing business in Europe or with European entities.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 780S Health Care Quality Regulation 3.0 Credits**

This course examines all aspects of medical errors and quality in health care, including malpractice suits, licensing, staff privileging of doctors, and current regulatory approaches. It will also look at issues of patient rights and autonomy, including consent, medical information, clinical research, and issues in death and dying.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 781S Health Care Business Regulation 3.0 Credits**

This course examines the history of the American health care system and will consider the tensions between costs and the access to care. Topics will include the federal Medicare and Medicaid systems, cost controls through health insurance and federal regulation, antitrust issues, ERISA, EMTALA, and other federal regulatory regimes.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 782S Health Policy Colloquium 2.0 Credits**

This course will use case studies to examine regulatory choices in health care. The course will first examine the tools available to regulators in the U.S. health care system. The course will then consider regulatory strategies that a regulator might consider to handle several case studies.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 780S

**LAW 783S Bioethics 2.0-3.0 Credits**

This class explores the legal and ethical issues surrounding the development of new biological technologies. Topics may include the research bioethics, assisted reproductive technology, genetics, issues surrounding death and dying, and organ transplantation.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 784S Health Care Finance 2.0-3.0 Credits**

This class will consider basic economic concepts related to health care finance and private insurance.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 785S Legal Regulation of Pharmaceutical and Medical Device Research and Development 3.0 Credits**

This course explores the regulatory entities and schemes governing the research and development, management, financing, and reporting requirements of clinical trials in the pharmaceutical and life sciences sectors. Topics include the role of the Institutional Review Board, compliance with Good Clinical Practice standards, informed consent, pharmacovigilance and the protection of human research subjects, payments and financial transparency, conflicts of interest, ethical considerations in designing and executing clinical trials, and reporting requirements.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 786S Products Liability 3.0 Credits**

This course focuses on the theories and scope of liability arising from the distribution and sale of harm-producing products. Topics include concepts of defectiveness, design problems, duty to warn and problems with causation.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 787S Legal Regulation of Pharmaceutical and Medical Device Sales and Marketing Practices 3.0 Credits**

This course explores the law governing pharmaceutical and medical device sales and marketing practices, including product pricing, advertising, labeling, promotion and distribution. Topics may include identification of the entities regulating pharmaceutical and medical device manufacturers, disclosure and transparency requirements, payments to doctors and institutions, fraud and abuse, anti-bribery laws, direct-to-consumer advertising including internet advertising, off-label marketing and promotion, labeling over-the-counter (OTC) drugs, and limitations on the government's ability to regulate commercial speech.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 788S Law of Medical Malpractice 2.0-3.0 Credits**

This course covers medical liability issues arising from the treatment relationship between health care providers and their patients. Topics include the history of the medical malpractice tort, its evolution as a "crisis," informed consent, the framework for a medical malpractice lawsuit, and an analysis of proposals for medical malpractice reforms.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 790S Toxic Torts 2.0-3.0 Credits**

This course will consist of an in-depth study of mass tort litigation of all kinds, at both the state and federal level, focusing primarily on the manufacture and distribution of defective and toxic products and pharmaceuticals. Class actions will be studied as a remedial tool.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 791S Regulating Patient Safety 2.0-3.0 Credits**

This seminar will look at the problem of medical errors in American health care, the emerging Patient Safety movement, and regulatory strategies for reducing errors and improving quality in hospitals, drug delivery systems, and physician office practices.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 792S Food and Drug Law 2.0-3.0 Credits**

This course considers the federal regulation of products subject to FDA jurisdiction, including food, human prescription and nonprescription drugs, animal feed and drugs, biologics and blood products, medical devices, and cosmetics. The course examines the public policy choices underlying the substantive law, FDA enforcement power, and agency practice and procedure.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 793S Mental Health Law 2.0-3.0 Credits**

This course introduces students to the legal doctrine related to the treatment and right of people with mental illness. It will also consider the role of mental health professionals in the functioning of law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 794S Advanced Torts 2.0-3.0 Credits**

Advanced Torts will cover areas of tort law particularly relevant to business, including tortious interference with contract, commercial defamation, breach of fiduciary duty and fraud, and spoliation liability.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 796S Insurance Law 2.0-3.0 Credits**

This course will survey the basic types of individual and corporate insurance policies, legal principles of insurance law and the role insurance plays in society. Topics may include insurance industry regulation, policy structure, risk management and interpretation, insurance marketing, insurance intermediaries, claims, and potential insurer defenses.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 802S Reflections on Practice 1.0 Credit**

This course is designed to accompany a CPT work experience. Working in the U.S. in law can be a challenging experience. The goal of this course is to help students learn from their work experience by the use of reflection and feedback.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 3 times for 4 credits

**LAW 803S Beginning Spanish for Lawyers 1.0 Credit**

This course is an introduction to the Spanish language for law students and is intended for students with limited experience with the language.

It is designed to help students develop basic communication skills in Spanish by engaging them in a variety of interactive tasks. As a skills course, it is student-centered in order to maximize students' active participation at the individual, small group and whole group levels.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 804S Intermediate Spanish for Lawyers 1.0 Credit**

This course is intended for law students who possess some experience with the Spanish language or have taken LAW 803S. It is designed to help students develop formal, professional communication skills in Spanish by engaging them in a variety of interactive tasks that mimic those found at an entry level lawyer/paralegal position. It is a skills course, which is student-centered, interactive and conversation-based. In class activities are designed in order to maximize students' active participation at the individual, small group and whole group levels.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 810S Adv Probs in Mental Hlth Law 2.0 Credits**

The goal of this seminar is to identify and challenge commonly accepted principles or precedents in mental health law. Students will be responsible for choosing, presenting, and leading a discussion on an issue of their choice.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 811S Expert Witnesses 2.0-3.0 Credits**

This course will examine the legal, policy, and practice considerations relating to the use of expert witnesses in civil and criminal cases. The course will examine the various roles of expert witnesses in civil and criminal cases, the rules of evidence that govern the recognition of experts and admissibility of expert testimony, techniques for effective direct examination and cross-examination of experts, and the ethical guidelines most relevant to expert testimony. This course will emphasize how attorneys can work effectively with experts (across disciplines) in the context of litigation.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit



**LAW 812S Behavioral Science Applications to the Law 2.0-3.0 Credits**

This seminar is designed to inform law students and selected doctoral students in psychology about the usefulness of social science information in the practice and scholarship of law while at the same time indicating the problems and pitfalls of using such information particularly at the appellate level. Thus, this seminar explores the interplay and conflict between law and psychology and the many ways in which social science research can or should have an influence on legal decision making.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 819S Transactional Competition Team 1.0-6.0 Credit**

This course is restricted to students who have been approved by the instructor to participate as team members in a transactional lawyering competition approved by the instructor, such as the Transactional LawMeet®. Students are required to participate fully as a team member and to compete effectively in the selected competition under the supervision of the instructor or a senior practitioner selected by the instructor to serve as the team's coach.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 2 times for 18 credits

**Prerequisites:** LAW 713S [Min Grade: D] (Can be taken Concurrently)

**LAW 820S Immigration Law 3.0-4.0 Credits**

This course covers issues in immigration law including inadmissibility and deportability, relief from removal, asylum and refugee status, citizenship, nonimmigrant and immigrant visas, and administrative and judicial review.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 821S European Union Law 2.0-3.0 Credits**

This course will cover an analysis of the Treaty of Rome and other relevant legal instruments and the major institutions and characteristics of European Union law, including basic freedoms of the treaty (free movement of persons, goods, services, and capital), the Commission, the European Parliament, the European Council, the Council of the European Union, and the Court of Justice of the European Union.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 822S Comparative Constitutional Law 2.0-4.0 Credits**

Focusing on constitutional structure and law in a variety of countries, this course will address comparative approaches to issues as judicial review, judicial appointment, separation of powers, federalism, and fundamental rights. The course will also explore fundamental, underlying questions about the nature of constitutions and constitutionalism, processes of constitution design, political constraints on constitutional rights and constitutional courts, and constitutional culture.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 823S Chinese Law 2.0 Credits**

This seminar will focus on the legal history and contemporary law of China. Subjects to be discussed include the Chinese legislative process and judicial system, recent developments in several areas of law, and the challenges that exist in reforming the current court system.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 824S International Law 3.0-4.0 Credits**

This course will examine the nature and sources of international law; international organizations, including the United Nations and the International Court of Justice; and the developing law of human rights. Other topics include the role of international law in the United States courts; the law relating to the use of military force; and international trade law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 825S International Human Rights Advocacy & Practice 2.0-3.0 Credits**

This seminar explores the use of international human rights strategies to advance social justice advocacy in the United States. On issues ranging from racial disparities in the criminal justice system to access to housing, U.S. lawyers increasingly use the human rights mechanisms of the United Nations and Inter-American Human Rights System, draw on international human rights and comparative foreign law in litigation before U.S. courts, and engage in broader advocacy such as documentation, organizing, and education. The course will examine the growing movement to incorporate international human rights strategies into U.S. social justice lawyering, explore the relevance of U.S. human rights advocacy in the current political landscape, and develop practical approaches to thoughtfully engage these tools.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 826S Refugee and Asylum Law 2.0-3.0 Credits**

This course explores the treatment of foreign refugees and political asylees, with particular emphasis on relevant statutes, regulations and treaties.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 827S Immigration Litigation 2.0 Credits**

The course will focus on handling cases before the immigration court. Beginning with an overview of the immigration court system and pertinent parts of immigration law, this course will also examine grounds of removal and of inadmissibility, bond motions, grounds to challenge the Notice to Appear, three of the most common forms of relief, adjustment of status and fear of return to home country. The course will be geared to a practical handling of these problems, but with a firm grounding in the legal authorities.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 828S International Business Transactions 2.0-3.0 Credits**

This course examines the legal framework of private international business transactions including: sales of goods and services, foreign investment, technology transfer and government regulation.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 830S Professional Responsibility 2.0-3.0 Credits**

This course will examine the ethical duties of lawyers toward clients, courts, and society. The course emphasizes the Model Rules of Professional Conduct, the Model Code of Professional Responsibility, and relevant case law. Topics covered include confidentiality, conflicts of interest, competence, fee arrangements, and the unauthorized practice of law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 832S Contract Theory Seminar 2.0-3.0 Credits**

This course is designed to get students thinking more creatively and deeply about the ideas animating contract law and policy. While the first-year Contracts course is about mastering the technical aspects and doctrines of contract law, this course is about taking those skills to another level. The overarching course goal is to consider and discuss the ideas which undergird and give life to contract law. The course will cover the basics of contract theory, surveying some different ideas about "the grand unifying theme of contract," examining the strengths and weaknesses of these different ideas and theories of particular doctrines in contract law (this could include consideration, promissory estoppel, efficient breach, and/or special problems of form contracts).

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 833S Race and the Law 2.0-3.0 Credits**

This course considers the role of race in American law and examines the role of law in constructing notions of race.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 834S Jurisprudence 3.0 Credits**

This course addresses essential questions about the nature of law and its role in society. What is law? What is its source of legitimacy? How does it function? Readings will consider major texts in Western jurisprudential philosophy.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 836S Legal History 2.0-3.0 Credits**

This course surveys Anglo-American legal history from the origins of the common law through the 20th century. The course will focus on the development of both legal institutions and substantive law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 838S Foundations of Legal Analysis 2.0 Credits**

This course is designed to develop and refine the skills necessary for legal analysis and writing. The course will be taught using a hands-on, experiential approach largely driven by written classroom exercises and written assignments submitted for evaluation and feedback by faculty. The course is based on three principles: varied and frequent writing practice; faculty feedback on written assignments; and analysis of writing models.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 840S Literature and The Law Seminar 2.0-3.0 Credits**

This seminar will explore the role of law, legal institutions, and legal actors in literature. It will also consider the ways in which literature and literary theory can be used in practice.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 842S Law and Mind Sciences 2.0-3.0 Credits**

Much of law and legal theory is based on commonsense assumptions about human behavior: criminals are evil; contracting parties act freely and with full knowledge; and workplace discrimination results from conscious prejudice. This seminar will explore evidence from social psychology, social cognition, cognitive neuroscience, and related fields that challenges these and similar conceptions.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 844S Law and Social Movements 2.0-3.0 Credits**

This course studies the various ways in which law succeeds - or fails - to bring about changes in the allocation of rights to groups and individuals. The class will focus on particular legal and social change movements, considering the effectiveness of strategies such as litigation and law reform.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 846S Law and Economics 2.0-3.0 Credits**

This course examines the law through the economist's lens. We will see whether a cohesive economic theory can be applied to explain the law, and examine the efficiency of current legal provisions. Students will gain an understanding of the economic rationale - or lack thereof - that underlies the law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 848S Courts and Public Policy 2.0-3.0 Credits**

This course explores how public policy is created, interpreted, and implemented through various governing agencies including courts, legislatures, administrative agencies, and "street-level" bureaucrats. Readings will examine the practical concerns about the capacity and competence of these different institutions to make and enforce laws. The course will engage theoretical questions, considering both the powers and limitations of courts in a democratic society.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 866S Advanced Immigration Law 2.0-3.0 Credits**

This course covers advanced issues concerning the law, policy, and politics of immigration and citizenship in the United States, including relevant perspectives on those issues from other disciplines. Topics covered may include the constitutional power to regulate immigration and its limits, discrimination against noncitizens by private and public entities, workplace and labor rights of noncitizens, the intersection of immigration and criminal law, federal enforcement priorities, asylum and humanitarian protections, state and local enforcement initiatives, immigrant integration and inclusion policies, the politics and policy of immigration reform, and selected contemporary litigation.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 820S [Min Grade: D]

**LAW 870S Business Law Legal Research 1.0-2.0 Credit**

This course covers business law-related resources, in both print and electronic format, including primary and secondary sources; company information and demographics; SEC and tax information and documents; and current awareness tools. Students will learn how to locate, use and evaluate these resources.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 565S and LAW 566S

**LAW 871S Intellectual Property Legal Research 1.0-2.0 Credit**

The goal of this course is to provide students with grounding in the materials essential to performing introductory intellectual project research, enabling them to complete complex IP research assignments, whether for coursework or practice. Classes will contain an overview of research tools, explanations on how to use them effectively and assignments demonstrating their proper use. This course will augment current and future IP course offerings.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 565S and LAW 566S

**LAW 872S Health Law Legal Research 1.0-2.0 Credit**

The goal of this course is to provide students with the tools necessary to perform effective legal research in all areas of health care law. Students will learn how to use electronic and print resources and techniques to research health law statutes, legislative history, case law, regulations, and literature, as well as medical and health sciences information. Overviews and explanations of research tools and sources will be given.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 565S and LAW 566S

**LAW 873S Foreign and International Legal Research 1.0-2.0 Credit**

This class will give students a working knowledge of research methods, in traditional print sources and in electronic formats, for conducting research in the laws of foreign countries and international law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 565S and LAW 566S

**LAW 874S Pennsylvania Legal Research 1.0 Credit**

In this course, students will become familiar with Pennsylvania primary resources (including cases, statutes, regulations, court rules, etc.) and Pennsylvania secondary legal resources (including practice guides, treatises, and CLE materials.) The class will cover all available resources, including print resources, free electronic resources, and subscription database resources. Grading is Credit/No Credit.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 565S [Min Grade: D] and LAW 566S [Min Grade: D]

**LAW 876S Tax Law Legal Research 1.0-2.0 Credit**

The goal of this course is to introduce students to the concepts of tax research and the sources of tax authority. The learning outcomes for this class include giving students familiarity with statutory interpretation and legislative history, regulations, administrative decisions and letter rulings, case law, and secondary sources on tax law. There will also be discussion of the authoritative weight of various types of tax materials. The course focuses on Federal tax law, but includes an overview of state tax research—with an emphasis on Pennsylvania law—as well as international tax research.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 565S [Min Grade: D] and LAW 566S [Min Grade: D]

**LAW 877S Criminal Law Legal Research 1.0-2.0 Credit**

This course covers basic criminal law research resources, in both print and electronic formats. Main topics include the following: primary and secondary resources of criminal law and procedure; interdisciplinary research; criminal law reports and statistics; and current awareness resources. This class covers both federal and state criminal law resources.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 565S [Min Grade: D] and LAW 566S [Min Grade: D]

**LAW 880S Advanced Legal Research 1.0-2.0 Credit**

This course provides students a thorough grounding in the research skills needed by today's lawyers. Students will learn how to use advanced electronic and print resources and techniques to research case law, statutes, legislative histories, administrative law, and other practice-based research tools.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 882S Litigation Drafting 2.0 Credits**

This course explores technical and strategic issues in the drafting of litigation documents such as complaints, answers, written discovery, motions, affidavits, discovery schedules, pretrial orders, jury instructions, releases and correspondence. Students will complete a number of drafting assignments in and out of class.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 884S Contract Drafting 2.0 Credits**

In this course, students will develop basic skills needed to draft and revise contracts. Through a variety of writing assignments, students will learn the component parts of typical contracts and their purpose, as well as the ways in which the substantive content can be customized to satisfy a particular client's needs and concerns. This involves translating deal points into contract concepts, as well as revising legal boilerplate to enhance and protect their client's interests. The course is designed to be helpful for students who plan to be litigators, as well as students who plan to do transactional work.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 886S Writing Strategies for the Bar 2.0 Credits**

This course will prepare students for the written portions of the bar exam - essays and performance test questions.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 887S Advanced Legal Analysis and Bar Skills 2.0-4.0 Credits**

This course will prepare students for the written essays, performance tests and multiple-choice questions of the bar exam. Students will develop their exam-writing skills by taking practice questions under exam conditions and receiving critiques of their answers. Students will also review several areas of substantive law commonly tested on bar exams.

NOTE: This course is not a substitute for a commercial bar review course.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 888S Writing for Judicial Clerkship 2.0 Credits**

This is an upper level writing course designed to prepare students seeking judicial clerkships for their particular writing tasks.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 890S Improvisation for Lawyers 1.0 Credit**

In this intensive course, students will hone their legal performance skills by studying improvisational theater techniques. The course will involve extensive hands-on performance.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 891S Communicating for Success 2.0 Credits**

The goal of this interactive seminar is to assist students in becoming practice-ready when they graduate from law school. The course will explore the array of skills and values that lawyers need to be effective in working with their clients using a relationship-centered model. Participants will draw upon their real world experiences in and out of law school to develop concrete tools and techniques to communicate with clients in a wide variety of contexts and to achieve better outcomes. Grading is Credit/No Credit.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 892S Starting & Managing Law Pract 1.0-2.0 Credit**

This course is designed to equip students with the knowledge, skills, and resources required to establish or manage a law firm. Topics will include marketing, case management, and ethical considerations.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 893S Accounting for Lawyers 2.0 Credits**

This course will introduce students to financial statements and accounting concepts that will facilitate law practice with corporate clients and in other matters where financial auditing is involved.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 894S Moot Court Board 1.0-6.0 Credit**

Students will be selected by the faculty supervisors to serve on the moot court board. Students will develop an intra-scholastic moot court competition and will be eligible to compete in interscholastic competitions.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 4 times for 6 credits

**LAW 895S Legal Decision Technology 3.0 Credits**

This course explores how legal decision technology can be used to expand public access to legal information. Students will learn about cutting edge legal decision technologies, hone their statutory interpretation skills, and build interactive apps that answer specific legal questions. This is a hands on, lab-style class, but no prior programming experience is required.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 896S Alternative Dispute Resolution Competition Team 1.0-6.0 Credit**

Students who have been selected for one of the Alternative Dispute Resolution competitions will enroll in this course and complete all required work in order to earn co-curricular credit for competition.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 3 times for 24 credits

**LAW 897S Technology for Law Practice 3.0 Credits**

This course teaches the basic technological and software skills needed for a daily law practice. Topics will include legal document management, drafting, and collaboration; spreadsheets; timekeeping; billing; e-discovery; case and practice management; cybersecurity; technology ethics and professional responsibility; and PDF creation and manipulation. Students will complete a legal technology audit that they can use as a blueprint for their future practice.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 900S Pre-Trial Advocacy 2.0-3.0 Credits**

Students will learn the major steps in the pretrial litigation process including theory development, client interviewing, informal fact, investigation, pleading, discovery, depositions, pretrial motions, jury selection, and the settlement process.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 902S Introduction to Trial Advocacy 0.0-3.0 Credits**

This course will teach students to perform trial skills based on strategic themes and theories. The students will conduct direct and cross-examination of lay, party and expert witnesses, opening and closing statements, make objections and introduce exhibits. The course will culminate with each student performing in a mock trial.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 634S [Min Grade: D] (Can be taken Concurrently)

**LAW 904S Advanced Trial Advocacy: Civil 2.0-3.0 Credits**

This course is a continuation of Introduction to Trial Advocacy and is an advanced civil trial skills class which teaches students advanced trial skills; evidentiary issues; and case development. Students will perform exercises and develop case theories using mock civil cases.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 902S

**LAW 906S Advanced Trial Advocacy: Criminal 2.0-3.0 Credits**

This course is a continuation of Introduction to Trial Advocacy and is an advanced criminal trial skills class which teaches students advanced trial skills; evidentiary issues; and case development. Students will perform exercises and develop case theories using mock criminal cases. The course will culminate with a criminal mock trial.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 902S

**LAW 907S Advanced Trial Advocacy: Courtroom Technology & Advocacy 2.0-3.0 Credits**

This advanced course focuses on analyzing both criminal and civil cases and preparing those cases for a presentation before a jury. The course is specifically designed to expand the skills already developed during the Introduction to Trial Advocacy course. The course methodology combines lectures, demonstrations and individual student performances, during which students will be responsible for conducting all aspects of a trial. There will be extensive critique and feedback by instructors experienced in the art of effective trial advocacy. The course culminates with each of the students conducting a complete mock trial. The course requires that all aspects of the students' trial presentations be given while utilizing technology, which may include TrialPad for the iPad, Power Point, Timeline 3d, iThoughts, etc.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 902S [Min Grade: CR]

**LAW 908S Adv Trial Ad: Trials/Century 2.0 Credits**

This course will teach students to understand, develop and perform advanced trial skills based on strategic themes and theories used throughout the trial process. Students will analyze actual trial transcripts and exhibits, and movie vignettes of advocates from famous "Trials of the Century."

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 902S

**LAW 910S Appellate Advocacy 2.0 Credits**

This course provides students with advanced training in appellate advocacy, including the study of the rhetoric of persuasion, the preparation of appellate briefs and effective oral advocacy, and will include an introduction to appellate procedure. This course is required for students serving on the moot court board.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 912S Deposition Skills & Technology 2.0 Credits**

Students will receive instruction through focused lectures, demonstrations and feedback from the professors on in-class performances. Students will spend a significant amount of time analyzing civil case files, preparing witnesses for depositions, learning questioning techniques and performing depositions of lay witnesses, parties and experts. Students will also use iPads with loaded deposition software to learn how to prepare and take depositions. Students will also use iPad technology to prepare post-deposition analysis of the depositions.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 918S Trial Team 1.0-6.0 Credit**

Students will compete in inter-scholarship mock trial competition.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 4 times for 6 credits

**LAW 920S Drexel Law Review 1.0-6.0 Credit**

Students will receive credit for their work in preparing and contributing to, the Drexel Law Review.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 4 times for 6 credits

**LAW 923S Pennsylvania Innocence Project Practicum 3.0 Credits**

This is a practicum in which students work on behalf of individuals claiming they were wrongly convicted of a crime and seeking exoneration. Each student will be assigned cases under the supervision of an attorney. In the course of investigating factual claims and researching legal issues, students will review criminal files, interact with investigators, contact other attorneys, interview the client and witnesses, gather documentation, and prepare legal documents and memoranda. Students will also learn the law relevant to both innocence claims and legal issues in their cases.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 924S Entrepreneurial Law Clinic 5.0-6.0 Credits**

The Clinic will offer business and intellectual property law counseling to entrepreneurial start-ups based in the Greater Philadelphia area. These services will range from entity formation, founders' agreements, and employment law counseling to trademark and patent registrations and general intellectual protection counseling.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 2 times for 12 credits

**Prerequisites:** LAW 713S

**Corequisite:** LAW 653S

**LAW 925S Field Practicum 1.0-3.0 Credit**

This is an immersive real-world experiential course designed to support students as newcomers to legal practice. Students will focus on the study of lawyers and their roles and obligations, and also have the opportunity to examine legal institutions within the context of a directed field experience into which the student has previously been accepted.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 21 credits

**LAW 931S Law Co-op 3.0-9.0 Credits**

The Co-op is a field placement in a corporation, law firm, judicial office, public interest organization, or government agency. Students must attend a pre-placement orientation and will work a set number of hours per week and satisfy the supervisor's expectations.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 2 times for 27 credits

**Corequisite:** LAW 654S

**LAW 933S Co-op Intensive 9.0-10.0 Credits**

The Co-op is a field placement in a corporation, law firm, judicial office, public interest organization, or government agency. Students must attend a pre-placement orientation and will work 35-40 hours per week and satisfy the supervisor's expectations.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 2 times for 14 credits

**Corequisite:** LAW 654S

**LAW 937S Advanced Co-op 2.0-3.0 Credits**

This course is for students who have already taken a two-quarter Co-op and want to extend that placement by one semester. Students must apply to their Co-op professor with a written proposal for a specific project developed with, and approved by, their field supervisor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 654S and LAW 931S

**LAW 941S Criminal Litigation Clinic I 5.0-6.0 Credits**

This clinical program places students in a criminal practice setting. Students will represent criminal defendants in all phases of pre-trial and trial activity. Students must enroll in both semesters of the clinic.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 942S Criminal Litigation Clinic II 5.0-6.0 Credits**

This course is a continuation of LAW 941S.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 941S

**LAW 943S Civil Litigation Clinic I 5.0-6.0 Credits**

This clinical program places students in a civil practice setting. Students will learn varied litigation skills in the context of direct representation of clients. Students must enroll in both semesters of the clinic.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 944S Civil Litigation Clinic II 5.0-6.0 Credits**

This course is a continuation of LAW 943S.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 943S

**LAW 947S Federal Litigation and Appeals Clinic 5.0-6.0 Credits**

This clinic provides intensive training in appellate advocacy by involving students in cases before the state appellate and federal courts. Students provide research; develop strategies; draft briefs; and engage in oral arguments. Students must enroll in both semesters of the clinic.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 948S Federal Litigation and Appeals Clinic II 5.0-6.0 Credits**

This clinic provides intensive training in appellate advocacy by involving students in cases before the state appellate and federal courts. Students provide research; draft briefs; engage in oral arguments; and assist in case selection, the development of substantive legal positions, and the creation of appellate strategy. Students must enroll in both semesters of the clinic. A grade will be assigned at the end of the Spring semester.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 947S

**LAW 950S Community Lawyering Clinic I 5.0-6.0 Credits**

The clinic offers students the unique opportunity to employ a variety of strategies including litigation, legal reform, community education, media advocacy, and even international advocacy to support the mobilization efforts of community groups working on the ground to achieve social justice. During the second semester, students, in collaboration with community leaders and guided by their ground-level work in the first semester, will design and implement projects aimed at addressing the systemic challenges facing the community, such as improving access to justice. The goal of the clinic is to build students' capacity as lawyers, leaders, advocates, policy analysts, and community organizers, while at the same time empowering and serving the community.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAW.

**LAW 951S Community Lawyering Clinic II 5.0-6.0 Credits**

This is a continuation of LAW 950S. Students must enroll in both semesters of this year-long clinic.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAW.

**Prerequisites:** LAW 950S

**LAW 970S Introduction to United States Legal Systems 2.0-3.0 Credits**

This course is an introduction to legal and ethical principles driving the U.S. legal system in the context of the history and jurisprudence of American law. It is designed to familiarize the student with the relevant and governing legal principles which are used in American jurisprudence. It will combine both an inquiry into these matters, and a more detailed study of legal issues, through special, current topics. The course seeks to develop a professional level of understanding in the student of a comprehensive approach to legal issues and the relevance of that methodology to professional ethics and life of the law in the United States.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is AMLP.

**LAW 971S English for International Lawyers: Working with Legal Texts 1.0-3.0 Credit**

This course is designed to provide non-native English speakers with an introduction to working with legal texts to strengthen written and verbal communication skills.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is AMLP.

**LAW 981S Litigation Technology 2.0-3.0 Credits**

This course will primarily focus on teaching students how to master pre-trial and trial advocacy skills through the use of the latest litigation technology.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 982S Jury Selection 2.0 Credits**

This course will primarily focus on the substantive law relating to jury selection and the strategic skills that students will need to master the art of jury selection. Students will learn both the Federal and PA statutes that govern jury selection as well as analyzing the leading case law relating to the constitutionality of jury selection. Students will also watch skilled lawyers and judges conduct voir dire and practice the skill themselves.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 998S Thesis I –Scholarly Legal Writing: Planning and Preparation 3.0 Credits**

This course will introduce you to research and writing techniques commonly used in legal scholarly writing. Specifically, this course will help you identify and develop an original thesis topic and will provide you with the foundation needed to draft, edit, and present an original scholarly work of publishable quality in Thesis II.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LAW 999S Thesis II – Scholarly Legal Writing: Writing, Refining, and Presentation 3.0 Credits**

Following Thesis I, this course will provide faculty-guided oversight and mentorship for the drafting, editing, and presentation of an original piece of publishable-quality legal scholarship akin to a law review article. Students will confer with a faculty advisor weekly, either live or via real-time video conference, submit interim drafts as assigned, and receive meaningful faculty feedback. Students will submit a final scholarly paper and present it to colleagues in a workshop format.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Prerequisites:** LAW 998S

**LAW I599S Independent Study in LAW 1.0-6.0 Credit**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LAW I699S Independent Study in LAW 1.0-6.0 Credit**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LAW I799S Independent Study in LAW 1.0-6.0 Credit**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LAW I899S Independent Study in LAW 1.0-6.0 Credit**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LAW I999S Independent Study in LAW 1.0-6.0 Credit**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LAW T580S Special Topics in LAW 1.0-5.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

**LAW T680S Special Topics in LAW 1.0-8.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

**LAW T780S Special Topics in LAW 1.0-5.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

**LAW T880S Special Topics in LAW 1.0-5.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

**LAW T980S Special Topics in LAW 1.0-6.0 Credit**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

## Legal Studies

### Courses

**LSTU 500S Introduction to the Legal System 3.0 Credits**

This course will begin to help students "think like lawyers" by providing an overview of the United States legal system. It will explain the legislative and judicial processes, so that students will gain an understanding of where the power to regulate originates and the basis of federal law and regulations. The course will then focus on substantive areas of the law, such as torts, contracts, and criminal law.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 1 times for 6 credits

**LSTU 501S Compliance Skills: Auditing, Investigation & Reporting  
2.0-3.0 Credits**

This is a skills course that provides students opportunities to develop internal audit skills and strategies, conduct internal investigation work plans, and draft executive level communications. The skills taught will include work plan development, investigative techniques, interviewing methods, class presentations, and drafting of projects plans and board/executive level reporting.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CHCC or major is CHEC or major is CHRC or major is CNCA or major is CRMM or major is LSTU.

**LSTU 502S Ethics and Professional Standards 2.0-3.0 Credits**

Students will be exposed to fundamental issues and current best practices in managing issues of ethical/legal compliance, corporate social responsibility and business ethics. Topics cover business issues, including anti-corruption, environmental crimes/compliance, child labor, employment discrimination, crisis management, whistleblowing, retaliation, fraud, privacy, sustainability and social enterprise. Special attention is given to preparing students to understand and manage the demands on corporations making complex business decisions in the face of increasing expectations for transparency and accountability.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LSTU.

**LSTU 503S Legal Research and Analysis 2.0-3.0 Credits**

Students will learn how to research topics and distill their research in written form through a series of exercises. They will also be expected to complete numerous written communications of increasing length and complexity. Detailed feedback will be provided on all written exercises by the professor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CHCC or major is CNCA or major is LSTU.

**LSTU 504S Health Care Rules and Regulations 3.0 Credits**

This course is designed to provide students with an understanding of the laws and regulations encountered by compliance professionals. The course will equip students to apply statutory and regulatory principles to situations that they will encounter in their work.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LSTU.

**LSTU 505S Health Care Quality, Patient Safety and Risk Management  
3.0 Credits**

This course will examine methods and tools for managing quality in health facilities, physician practices, managed care, and public health; including developments in quality assurance and improvement, utilization review, risk management, and patient satisfaction.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CHCC or major is CNCA or major is LSTU.

**LSTU 506S Patients and Privacy: HIPAA and Related Regulations  
2.0-3.0 Credits**

The focus of this course will be the privacy and security provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), the foundation for federal protections of health care information. Additionally, the course will examine the interplay between HIPAA and other federal and state health privacy laws and the application and enforcement of those laws in a variety of health care settings. The class will incorporate discussions about the close and evolving relationships among health care policy, evolving social norms, and health privacy laws.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CHCC or major is LSTU.

**LSTU 507S Risk Assessment and Management 3.0 Credits**

Risk assessment and management has become a crucially important field for private sector business as well as government sector agencies and organizations, particularly over the past decade following the passage of laws such as Sarbanes-Oxley and Dodd-Frank. This course will examine regulatory compliance and risk management issues that impact various corporate and governmental entities, providing students the opportunity to explore risk analysis and compliance in a variety of legal environments. This course will help familiarize students with issues that might arise in corporate risk management departments, contracts departments, risk management consulting, and the regulatory compliance departments of financial services industries, banking, insurance, credit, risk assessment, and benefits management.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CHCC or major is CHEC or major is CHRC or major is CNCA or major is CRMM or major is LSTU.

**LSTU 510S NCAA Governance Process 3.0 Credits**

This course will allow students to examine whether the increasing intensification of college sports might support or detract from higher education's core mission. Students will begin to understand the NCAA legislative process, and understand the tradeoffs between the intensification of sports programs and educational policy at higher education institutions.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CNCA or major is LSTU.

**LSTU 511S NCAA Rules I and Infractions Cases 3.0 Credits**

This course will cover NCAA Division I rules and regulations. Students will also examine the impact of intercollegiate athletics on undergraduate education, particularly at large public research universities with high-profile football and men's basketball teams playing at the top National College Athletics Association level.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CNCA or major is LSTU.

**LSTU 512S NCAA Rules II and Enforcement Process 3.0 Credits**

This course will continue to cover NCAA Division I rules and regulations, the impact of intercollegiate athletics on undergraduate student athletes and non-athletes, and the funding of academic departments.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CNCA or major is LSTU.



**LSTU 513S Sports Agents and Athletes 2.0-3.0 Credits**

This course examines the history of the sports agent business and the rules and laws developed to regulate the profession. Students will also learn about the recommendations for reform, including uniform laws that would apply to all agents, redefining amateurism in college sports, and stiffening requirements for licensing agents. The passage of the federal Sports Agent Responsibility and Trust Act will also be covered.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CHCC or major is CNCA or major is LSTU.

**LSTU 515S Information Privacy Law 3.0 Credits**

This course will introduce students to the development of information privacy law in the United States. It will focus on legal regulations limiting government access to private information as well as laws regulating the ability of third parties to access such information. It will conclude with an introduction to the privacy regulatory regime imposed by the Federal Trade Commission and European Union regulators.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LSTU 517S The Law and Strategies Surrounding Cybersecurity 3.0 Credits**

This course will introduce students to the legal and regulatory frameworks governing US cybersecurity. It will examine topics including domestic cybersecurity standards, data breach notification and response, and the creation of compliance programs to manage cybersecurity risks.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LSTU 520S Legal Issues in Employee Hiring and Termination 3.0 Credits**

Legal issues in hiring and termination of employees are at the core of human resources responsibilities. This course will examine regulatory compliance and management issues that arise in the context of hiring and terminating employees with special consideration of federal law and its continued developments. This course will help familiarize students with issues that arise in human resource departments, particularly as they pertain to those points of entry and exit and where the need to document becomes a critical duty of those managing the hiring, evaluation and termination process.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 1 times for 6 credits

**Restrictions:** Can enroll if major is CHRC or major is LSTU.

**LSTU 521S Human Resources Compliance: Managing the Employer/Employee Relationship 3.0 Credits**

This course is designed to introduce students to the fundamentals of human resource compliance and regulation and to provide an overview of the skills necessary to manage human resources effectively. The course will examine why human resource management matters in today's business world and will show how employee performance and legal compliance serve as intermediary processes that connect human resource practices to organizational performance and effectiveness. Students will discuss the various ways in which the employer/employee relationship can be harnessed in positive ways rather than be seen in an adversarial light. This course will highlight issues that might arise in human resource departments, compliance departments and benefits management departments.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CHRC or major is LSTU.

**LSTU 522S Human Resources in Practice: Negotiation, Mediation, and Alternative Dispute Resolution 3.0 Credits**

Human resource managers deal not only with laws, rules and regulations, but also and foremost, with people. This course explores the practical reality of working in human resources and provides the necessary skills to ensure competency and success. The course focuses on negotiation with subordinates, peers and supervisors; mediation, because human resource workers often act as informal mediators between employees and supervisors; and alternative dispute resolution, as more employers require their employees to submit their complaints to some form of resolution process as an alternative to a formal lawsuit. This course will familiarize students with issues that arise in human resource departments and provide them with concrete tools to analyze, understand, and implement the best possible path to resolution.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CHRC or major is LSTU.

**LSTU 530S Corrections Law 2.0-3.0 Credits**

This course is designed to introduce students to the constitutional rights of prisoners and the implications of those rights for prison management. In particular, students will gain a working knowledge of the role of the First Amendment in regulating inmate mail, associational rights, religious practice, and visitation. They will learn how the Fourth Amendment relates to searches of both inmates and visitors. Students will discover how the Fifth and Fourteenth Amendment Due Process rights control inmate transfer, classification and discipline. They will also learn how the Eighth Amendment controls prison policy with respect to the conditions of confinement and provision of health care.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CRMM or major is LSTU.

**LSTU 539S Compliance Communications 3.0 Credits**

This course serves as an introduction to the fundamentals of writing specific to the growing area of compliance and addresses why compliance writing is different than general business writing. Assignments are drawn from the various types of writing that are typical of compliance professionals in various industries. Topics include writing for different audiences (various corporate departments, c-suite executives, boards of directors, regulators, the public, etc.), policy and procedure writing, the complexities of communicating with a diverse global audience, investigation memos and evaluation/communication of metrics-based data.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**LSTU 540S MLS Masters Capstone 3.0-4.0 Credits**

This course will provide students with faculty and peer support and guidance in preparing a capstone research project in completion of the Master of Legal Studies. Students will prepare a major written project which may consist of a novel legal claim supported by a substantial literature review or an experientially-based study grounded in a substantial literature review.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is CHCC or major is CHRC or major is CNCA or major is LSTU.

**LSTU I599S Independent Study in LSTU 0.0-12.0 Credits**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LSTU I699S Independent Study in LSTU 0.0-12.0 Credits**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LSTU I799S Independent Study in LSTU 0.0-12.0 Credits**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LSTU I899S Independent Study in LSTU 0.0-12.0 Credits**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LSTU I999S Independent Study in LSTU 0.0-12.0 Credits**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated 6 times for 6 credits

**LSTU T580S Special Topics in LSTU 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

**LSTU T680S Special Topics in LSTU 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

**LSTU T780S Special Topics in LSTU 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

**LSTU T880S Special Topics in LSTU 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

**LSTU T980S Special Topics in LSTU 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** Thomas R. Kline School of Law

**Repeat Status:** Can be repeated multiple times for credit

## Master of Lab Animal Science Courses

**MLAS 500S Animal Nutrition 3.0 Credits**

This course will provide an overview of the basic principles of animal nutrition including nutrition concepts and related historical/current research. Upon completion, each student should understand the digestion, absorption and metabolism of the various food nutrients, characteristics of the nutrients, measurement of body needs, and ration formulation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 501S Laboratory Animal Seminar 2.0 Credits**

This course is open to second year MLAS students. The seminar allows students to network with other laboratory animal professionals in preparation for their career in the field. Each week, a different guest speaker will present information about state-of-the art equipment, animals and techniques.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 502S Occupational Safety and Health in Laboratory Animal Care and Use Programs 3.0 Credits**

The role of an occupational safety and health program is to recognize health risks and hazards associated with the care and use of research animals. The goal of this course is to assist the laboratory facility manager and/or supervisor with the development or re-evaluation the occupational safety and health program within their individual animal care and use program.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 503S The Institutional Animal Care and Use Committee's (IACUC) Role in Animal Research 3.0 Credits**

The Institutional Animal Care and Use Committee (IACUC) is responsible for overseeing and evaluating all aspects of an animal care and use program. This course will introduce students to the origin, authority, membership, and functions of the IACUC. Specific functions such as: oversight, review of animal use proposals, animal care and use concerns, and record keeping will be addressed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 504S Public Outreach for Animal Research 3.0 Credits**

This course will provide a solid foundation about animal research and its role in producing new knowledge and discoveries that benefit the public, other animals, and the environment. Students will learn about the range of outreach tools and techniques for engagement with the broader public, including how to speak about the important role they play in the laboratory animal environment.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 9 credits

**MLAS 510S Clinical Orientation In Laboratory Animal Facilities 1.0 Credit**

Two hours per week of hands-on experience working in the university's laboratory animal facilities. Students do most of the daily work performed by the animal technicians, such as cage washing, placing animals into new cages, environmental sanitation, treatments (if necessary), tuberculosis testing of primates and the like. Species usually housed include rats, mice, rabbits, guinea pigs, dogs, cats, primates, swine, etc. The goal of the course is to provide the necessary skills and exposure to allow students to become familiar with many of the examples that will be used in later courses by their instructors. It also provides an introduction to the Practicum experience of the second year.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAS.

**MLAS 513S Biochemical Basis of Disease (Upenn) 2.0 Credits**

Lecture at the University of Pennsylvania veterinary school. Biochemical and molecular basis of disease. In-depth biochemical examination of specific aspects of selective diseases.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MLAS 512S and PHGY 503S

**MLAS 514S Hematopoiesis (Upenn) 1.5 Credit**

Lecture at the University of Pennsylvania veterinary school. Correlates clinical and basic science in comparative hematology. Recent developments in clinical medicine and basic research of disorders of blood cells. A paper on a hematology topic makes up part of the grade.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAS.

**MLAS 520S Financial Mgmt In Lab Anim Sci 3.0 Credits**

Animal facility managers and veterinarians must understand more about financial management than they realize. It is not unusual for budgets and cost-accounting methods to be poorly understood, and therefore left to others. The manager is at the mercy of somebody else's numbers, yet he or she may be held responsible for hundreds of thousands of dollars.. The instructor, an animal facility manager with an M.B.A. degree, gives a strong background in many aspects of financial management, not just those that are core to animal facility and veterinary practice management.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAS.

**MLAS 521S Arch Eng & Plan For Anim Fac 4.0 Credits**

The course of instruction, presented by one of the nations leading architectural and engineering firms, encompasses general design considerations, working with architects and engineers, reading and producing drawings, proximity considerations, control systems, heating, ventilation, air conditioning, etc. The goal is to give the student a unique background, not only in facility design and engineering, but also in understanding why things are the way they are. Students are expected to develop and present a floor plan.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 523S Organizational Management 3.0 Credits**

Organizational management provides the theoretical background necessary for the practical application of managerial skills especially in laboratory animal facilities.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 525S Animal Anatomy 2.0 Credits**

An introductory independent study course that will provide a background in gross animal anatomy. Students will learn comparative anatomy by comparing the anatomical structures in several species of laboratory animals using synthetic models.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAS.

**MLAS 529S Molecular Genetics 3.0 Credits**

The focus of this course is to expose students to "cutting edge" molecular genetic concepts as they apply to laboratory animal science. The course provides a description of DNA structure, an overview of its replication and function in gene expression, an overview of the structure and function of nuclei & chromosomes, a sampling of tools used for genome analysis and a sampling of the basic techniques used in a molecular genetics laboratory. Various genome-sequencing projects are discussed along with the information they provide about the organization of a complex genome.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 530S Biostats In Vet Science 3.0 Credits**

This course will cover biostatistical methods and principles and their application in the field of veterinary science-both in clinical setting and in research. The application of biostatistics in veterinary epidemiology will also be discussed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 531S Embryology 3.0 Credits**

Embryology is the study of anatomy from the time of fertilization through the time of birth. The course discusses the "hows" and in part the "whys" concerning the development of the morphology and structure of the body. Knowledge of embryology is essential for understanding gross anatomy and the developments of birth defects.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 535S Biology & Care Of Lab Animals 4.0 Credits**

Many specialists in laboratory animal science teach this course. Part of this course is devoted to discussions of the ethics of using animals in biomedical research. The remainder of this team taught course discusses the care, use and husbandry of rodents, lagomorphs, primates, farm animals, carnivores, etc., as well as presentations on sanitation and other pertinent subjects. The primary goal is to provide the student with the information needed to properly care for the physical and psychological needs of laboratory animals.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MLAS 510S

**MLAS 536S Animal Models for Biomedical Research 1.0 Credit**

In this course university investigators will discuss their research using animal models, emphasizing why they chose the animal model they are using and how the model helps them understand basic biological processes. Grading is based on a single term paper.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAS.

**MLAS 545S Fundamentals of Histology 3.0 Credits**

This course is a survey of the basic tissues of the body with an emphasis on the structure of normal cells, their specializations and methods of acting together to form tissues and organs. The normal structure-function relationships at the subcellular, cellular and tissue levels are emphasized. This course provides students with a framework for recognizing and interpreting the changes seen in disease states.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 546S Special Topics in Anatomy 4.0 Credits**

Cross listed course given concurrently with students from other programs. This course is mostly human oriented. MLAS students who have gone on to veterinary school have commented on how valuable it was. It provides a systemic review of the entire body. Human prosections are included in the course work.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAS.

**MLAS 547S Special Topics in Anatomy Lab 2.0 Credits**

Discussions on and gross anatomical dissections of common laboratory animals. Comparisons with human anatomy.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAS.

**Prerequisites:** MLAS 546S

**MLAS 606S Clinical Laboratory Techniques and Concepts 1.0 Credit**

Hands-on and theoretical laboratory work. Teaches animal handling and injections, serological testing, microbiology techniques, hematology and urinalysis. There is an emphasis on correct specimen handling and preparation as part of a quality control program. Your instructors will expect you to do independent reading and be able to extrapolate your knowledge to various case reports.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAS.

**MLAS 610S Diseases of Laboratory Animals 3.0 Credits**

Reviews the major diseases of laboratory animals, and provides information on surgery, anesthesia and radiology. Unlike clinical veterinary medicine where a common objective is to make a sick animal healthy, in laboratory animal medicine the objective is to prevent a healthy animal from becoming sick. The goal of the course is to have the student understand means of disease prevention and recognition. This course will be taught, as much as possible, in a modified problem based learning format.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is LAS.

**Prerequisites:** MLAS 535S

**MLAS 800S Registered for Degree 0.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS 801S Laboratory Animal Practicum 12.0 Credits**

The practical application of what was learned in class. The entire final MLAS semester is spent in one of many animal facilities in the Philadelphia area or around the nation. To the extent possible, time is divided between basic animal care, management, laboratory techniques, and research. S/U grading.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MLAS I599S Independent Study in Master of Laboratory Animal Science 0.0-12.0 Credits**

Self-directed within the area of study requiring intermittent consultation with a designated instructor.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 0 times for NaN credits

**MLAS T580S Special Topics in Laboratory Animal Science 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**MLAS T680S Special Topics in Laboratory Animal Science 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**MLAS T780S Special Topics in Laboratory Animal Science 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**MLAS T880S Special Topics in Laboratory Animal Science 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**MLAS T980S Special Topics in Laboratory Animal Science 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Medical and Healthcare Simulation

### Courses

## Medical Science Preparatory

### Courses

**MSPP 505S Laboratory Techniques in Biochemistry & Molecular Biology 2.0 Credits**

This is a laboratory course that is designed to introduce students to essential concepts, contemporary techniques and procedures used in biochemistry and molecular biology research laboratories.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MSPP 511S Concepts in Biochemistry and Cell Biology 4.0 Credits**

This course introduces structure and function of the major groups of biomolecules (proteins, nucleic acids, lipids and carbohydrates) and essential structures that constitute a cell. Also discussed are basic biochemical and molecular mechanisms/pathways that contribute to homeostasis, such as protein synthesis, cellular energetics, signal transduction, and techniques to study cells and their constituents.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MSPP 512S Psychosocial and Behavioral Factors in Health and Medicine 3.0 Credits**

This course will provide a foundation of information regarding the psychosocial, cultural and behavioral determinants of health and wellness specific to the practice of medicine. Topics will address psychological, sociological and biological concepts from the extant literature and how these concepts relate to best practices and standards of care in health settings.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MSPP 513S Advanced Human Anatomy 4.0 Credits**

This course provides extensive exposure to select organ systems at the gross anatomical, microscopics, and ultrastructural levels. Structural and functional relationships are considered in depth. The format of the course is slide-show and lecture-based. Please note: this is not a cadaver based dissection course.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MSPP 515S Advanced Human Physiology 4.0 Credits**

Topics covered in this course include: homeostasis, cellular physiology, membrane and neuronal physiology, central and peripheral nervous systems, muscle physiology, cardiac physiology, blood vessels and blood pressure, blood and body defenses, respiratory systems, urinary system, fluid and acid base balance, and the endocrine system.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MSPP 525S Community Dimensions of Medicine 2.0 Credits**

This course introduces students to the community dimensions of medicine in an effort to provide skills and insight that will expand their cultural competence as they move towards a career in healthcare. The curriculum is designed to integrate key principles of health and healthcare inequities with concrete experiences had while volunteering with local health service sites. Students will be challenged to reflect on individual, societal and institutional factors that contribute to their own health as well as their surrounding community. Through a cohort-wide project that consists of planning and managing a health symposium, students will have the opportunity to network with public health researchers and healthcare professionals.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MSPP 550S Research Project 2.0 Credits**

This course involves conducting an independent bench-top, or clinical research project under supervision of an advisor within or outside the university. The research can be conducted at a clinical site, basic science research lab, or as a community project in psychology or public health and requires a minimum time commitment of 80 hrs. Students are expected to identify an advisor and, in conjunction with the advisor, to develop a hypothesis that is to be tested during this 80 hour period. The advisor must have a PhD, MD or DO, or other terminal degree ONLY. Upon completion of the project, students will submit a paper summarizing their project. A grade of S (satisfactory) or U (unsatisfactory) will be assigned based upon the completion of the required 80 hours, as evaluated by the advisor, and a paper.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MSPP T580S Special Topics in Medical Science Preparatory 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Medicine

### Courses

**MEDI 751S INTRODUCTION TO CLINICAL MEDICINE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8010S Medicine 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8015S Ambulatory Medicine Clerkship 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated multiple times for credit

**MEDI 801S MEDICINE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8112S Allergy/Immunology-2wks 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8114S Allergy, Asthma and Immunology 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 8122S GEN INTERN MED/COMMUN MED 2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8124S GENERAL INTERNAL MED/COMM. MED 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 8126S GENERAL INTERNAL/COMM. MED 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8128S MEDICINE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8132S Women's Hlth Ambulatory\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8134S Women's Health-Ambulatory 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8142S Women's Health-Academic\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated multiple times for credit

**MEDI 8144S Women's Hlth Education 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8154S Ambulatory Rheumatology 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8162S Women's Hlth in Community\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8164S Women's Hlth in the Community 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8174S College Women's Health 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8182S Women's Health & Public Policy 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MEDI 8184S Women's Health & Public Policy 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8194S Clinical Cardiology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8222S Ambulatory Nephrology\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8224S Ambulatory Nephrology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8234S Ambulatory Endocrinology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8244S Pulmonary Elective 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8272S AMBULATORY CARE - 2 WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8274S AMBULATORY CARE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8312S CLINICAL CARDIOLOGY - 2 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8313S CLINICAL CARDIOLOGY - 3WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8314S CLINICAL CARDIOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8322S CORONARY CARE UNIT 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 8324S Coronary Care Unit Subintern 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8334S HEART FAILURE/TRANSPLANT 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 833S CRITICAL CARE SUBINTERNSHIP 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8342S Cardiology:Consult. 2wks (S/U) 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8344S CLINICAL CONSULT CARDIOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8352S ECG READING - 2 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8354S ECG READING 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8362S CARDIAC ELECTROPHYS & ARRY 2WK 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8363S CARDIAC ELECTROPHY & ARRHY-3WK 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 8364S Cardiac Electrophys & Arrhythm 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8372S ECG-INTERP/NON-INVASCARDIO 2WK 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 8373S ECG Non Invasive Cardiology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8374S ECG INTERP/NON-INVASIVE CARDIO 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 8412S Endocrinology\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 8413S Endocrinology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8414S ENDOCRINOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 846S INDIAN HEALTH SERVICE ELECTIVE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8502S MEDICINE SUBINTERNSHIP - 2 WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8504S MEDICINE SUBINTERNSHIP 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 850S MEDICINE SUBINTERNSHIP 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8512S GENERAL INTERNAL MEDICINE 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 8514S GENERAL INTERNAL MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 851S CLINICAL CARDIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8524S MEDICAL CONSULTATION 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 852S CLINICAL CARDIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 854S GENERAL CARDIOLOGY-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 857S CORONARY CARE UNIT SUBINTERN 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 859S ENDOCRN.,DIABETES & METABOL. 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 860S ENDOCRINOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 861S ENDOCRIN/DIABETES/METABOL-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8622S Ambulatory Gastr&Hepatology\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8624S Ambulatory Gastro & Hepatology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8632S CLINICALGASTROENTEROLOGY- 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8633S CLINICAL GASTROENTEROLOGY-3WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8634S CLINICAL GASTROENTEROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 863S CLINICAL GASTROENTEROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8642S Clin Gastro & Hepatology\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 8644S Clin Gastro & Hepatology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 864S CLINICAL GASTROENTEROLOGY-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8652S Clin Gastro & Hepatology\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 8654S Clin Gastro & Hepatology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 865S CLIN GASTRO & HEPATOLOGY 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 866S CLIN GASTRO & HEPATOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 868S GERIATRIC MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 869S RESEARCH IN HUMAN GENETICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 870S HEMATOLOGY & MED ONCOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8712S PHYSICAL & REHAB MED 2WKS(S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8714S PHYSICAL & REHAB MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit



**MEDI 8722S Addiction Medicine-2wks 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8724S Addiction Medicine 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 872S HEMATOLOGY AND MEDICAL ONC. 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8734S Urgent Care/Amb. Med/Onc UC 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**MEDI 8746S Indian Health Services-6 weeks 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 876S INFECTIOUS DISEASES 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 877S INFECTIOUS DISEASES - 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 880S TROPICAL MED&INFECT DIS-8WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8812S PULMONARY MEDICINE - 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 8813S Pulmonary Medicine 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8814S PULMONARY MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 881S TROPICAL MED& INFECT DIS-6 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8822S Pulmonary and Critical Care\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8824S Pulmonary Med/Intensive Care 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 882S MED INTENSIVE CARE UNIT-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8832S MED INTENSIVE CARE UNIT-2WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 8833S Medical Intensive Care Unit 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**MEDI 8834S MEDICAL ICU/CCU SUBINTERNSHIP 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 883S MEDICAL INTENSIVE CARE UNIT 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 884S MEDICAL ICU/CCU SUBINTERNSHIP 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 885S PULMONARY MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 886S MICU/PULMONARY-SUBINTERNSHIP 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 888S PULMONARY MED./ INTENSIVE CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 889S PULMONARY MEDICINE - 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 890S CLINICAL NEPHROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8912S INFECTIOUS DISEASES- 2WKS(S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 8913S Infectious Disease 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8914S Infectious Diseases 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8926S TROPICAL MED &INFECT DIS-6 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 8928S TROPICAL MED & INFECT DIS-8WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 892S RHEUMATOLOGY-2 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8932S Hospitalist Medicine\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 8934S Women's Health in Surgery 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 893S RHEUMATOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 894S HOSPICE/PALLIATIVE CARE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 895S MEDICINE-ELECTIVE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 896S MEDICINE - ELECTIVE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 902S AMBULATORY HEMATOLOGY/ONCOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 903S BUS OF MEDICINE - MANAGED CARE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9092S ACTING INTERNSHIP IN PM&R-2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9093S ELECTIVE-MEDICNE -3WKS. 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 9094S MEDICINE - ELECTIVE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9096S MEDICINE - ELECTIVE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9112S RHEUMATOLOGY - 2 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 9114S RHEUMATOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9124S RHEUMATOLOGY/IMMUNOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 914S RHEUMATOLOGY/IMMUNOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 915S CLIN GASTROENTEROLOGY AT ACDH 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 920S OCCUPATIONAL MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9212S Geriatric Medicine\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9214S Geriatric Medicine 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 921S OCCUPATIONAL MEDICINE - 2 WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9222S Palliative Care\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9224S Clin Elect - Palliative Care 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 9234S HOSPICE/ PALLIATIVE CARE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 927S PHYSICAL & REHAB MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9312S Hematology & Oncology\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9313S HEMATOLOGY & ONCOLOGY - 3 WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9314S HEMATOLOGY & MED ONCOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9322S Ambul. Hematology/Oncology\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 9324S Ambulatory Hematology/Oncology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 9332S BONE MARROW TRANSPLANT 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9334S BONE MARROW TRANSPLANT 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9342S Hematology/Med Onc Inpt\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9344S Hematology/Med Onc Inpt Cnslts 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9412S BUS. OF MED.,MANAGED CARE 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 9414S BUS OF MEDICINE - MANAGED CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 945S CLINICAL CONSULT CARDIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 947S HEMATOLOGY/MED ONC INPT CNSLTS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9482S HIV MEDICINE - 2WKS (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9484S HIV Medicine 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 948S HIV MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 950S ELECTIVE CLINICAL CARDIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9512S CLINICAL NEPHROLOGY - 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 9513S Nephrology - 3 Weeks 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9514S Clinical Nephrology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 951S CLINICAL NEPHROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 952S ALLERGY,ASTHMA, AND IMMUNOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 953S CLINICAL NEPHROLOGY, SERVICE A 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 954S NEPHROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9612S OCCUPATIONAL MEDICINE- 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 9614S OCCUPATIONAL MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 961S CARDIOLOGY - B 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9634S Clinical Informatics 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 965S HEART FAILURE/TRANSPLANT 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 971S MEDICAL RESEARCH 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9752S RESEARCH- MEDICINE- 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 9754S RESEARCH - MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**MEDI 9758S Research-Medicine 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9764S RESEARCH - HUMAN GENETICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**MEDI 9812S Inclusion Health Elective\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated multiple times for credit

**MEDI 984S MEDICAL CONSULTATION 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**MEDI 990S AMBULATORY CARE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 991S AMBULATORY MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 992S CARDIAC CARE UNIT 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 993S CARDIAC ELECTROPHYS & ARRHYTHM 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 995S CORONARY CARE UNIT 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 996S ECG READING 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 997S PEDIATRIC-ADULT ALLERGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI 998S ECG READING - 2 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI S744S Blood&Marrow Stem Cell Transpl 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI S812S Adv.Wilderness Life Support\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated multiple times for credit

**MEDI S846S CDC Epidemiology Elective Prog 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI S854S Digestive Diseases 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI S864S Integrative Medicine-Virtual 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated multiple times for credit

**MEDI S874S Clin Infectious Disease&Microb 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI S884S Internal Med Subspecialty Elec 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI S894S Clin Infect Dis-Transplant&Can 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI S914S Breast Medical Oncology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**MEDI S934S Life with IDD 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

## Microbiology and Immunology

### Courses

#### MIIM 500S Medical Microbiology 5.0 Credits

This course offers detailed discussion of immunology and all aspects of the major infectious diseases of bacterial, viral, parasitic and mycotic origins. The course, although designed for medical students, also accommodates graduate students, who will be required to complete additional assignments.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

#### MIIM 502S Microbiology and Immunology Journal Club 1.0 Credit

Faculty members rotate in directing this weekly session devoted to increasing the critical analysis skills of students, providing experience in oral presentation of data, increasing student awareness of various sources of literature, and exposing students to current areas of importance in microbiology and immunology. Recent topic themes have included T-cell immunoregulation, molecular virology, regulatory and safety requirements in microbiology research, lymphokines and cytokines, neuroendocrine immunology, bacteriocins, molecular biology of parasites, and regulation of humoral immune responses.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 9 times for 10 credits

#### MIIM 503S Biomedical Ethics 2.0 Credits

Explores the key responsible conduct of research topics that are the foundation of scientific integrity. Through reading assignments, learning modules, simulations, cases studies, role-play, and a team project, students learn about, discuss, and debate the ethical dilemmas and challenges research scientists encounter. NOTE: This online course does not fulfill requirements for participation in NIH-sponsored research. Students interested in conducting NIH-sponsored research should instead enroll in IDPT 500S Responsible Conduct of Research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 504S Microbiology and Immunology 1st Rotation 4.0 Credits**

First laboratory rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during the spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 505S Microbiology and Immunology 2nd Rotation 4.0 Credits**

Second laboratory rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during the spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 506S Microbiology and Immunology 3rd Rotation 4.0 Credits**

Third laboratory rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during the spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 508S Immunology I 3.0 Credits**

This is a graduate level introductory course that will cover basic principles of immunology. The format is a lecture series with student participation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IDPT 521S [Min Grade: B] (Can be taken Concurrently)

**MIIM 512S Molecular Pathogenesis I (Viral Pathogenesis) 2.0 Credits**

This course introduces fundamental concepts in molecular virology through presentation and discussion of viruses that cause disease in humans. Students learn about important aspects of virus infection, including virus structure, replication, molecular pathogenesis, antiviral immune responses, the development of antiviral drug therapies, and the use of viruses in gene therapy. Students also learn to read, understand, and critically evaluate virology-related papers published in the primary literature.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 513S Molecular Pathogenesis II 3.0 Credits**

Designed to convey basic concepts concerning the molecular mechanisms of disease caused by pathogenic microorganisms. Utilizes information derived from in vitro and in vivo model systems as well as studies performed in humans to enhance understanding of diseases caused by bacteria, fungi, parasites and viruses. The immune response and other host defense mechanisms will also be examined. The course is designed to complement the first year graduate core curriculum and will strive to develop analytical thought processes. Students learn to identify gaps in knowledge, formulate important and experimentally approachable questions, and develop sound hypotheses to direct the generation of new scientific discoveries. The development of sound specific aims and experimental design will also be emphasized.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 514S Grant Building 2.0 Credits**

This course provides students with training in scientific writing that culminates in the preparation of an NIH-style grant application. Each student prepares an original research proposal based on an assigned primary paper in the microbiology and immunology literature. Assignments during the course are completed in a progressive manner, and are guided by both faculty mentorship and peer review by classmates. At the conclusion of the course, each student submits a written proposal and presents an oral defense of the research outlined in the written proposal.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IDPT 521S [Min Grade: B] and IDPT 526S [Min Grade: B]

**MIIM 515S Concepts in Biomedicine I 3.0 Credits**

Introduces basic concepts of eukaryotic cell organization and function, with emphasis on macromolecules (i.e., proteins, nucleic acids, polysaccharides and membranes) and their microenvironment. Will provide a foundation to normal body functions at the cellular and molecular level.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 516S Concepts in Biomedicine II 2.0 Credits**

Introduces basic aspects of fundamental eukaryotic cellular processes that control cell growth and function, with emphasis on biochemical pathways and regulatory mechanisms, cell cycle, intracellular trafficking networks, and cellular communication mechanisms. Will provide a foundation to normal cellular processes that are dysregulated in disease states such as cancer and infections.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 517S Applied Statistics for Biomedical Sciences 2.0 Credits**

An intensive introduction to statistical methods. Students learn to apply principles of statistical reasoning, underlying assumptions, and careful interpretation of results. In addition, students learn how to present statistical data within various contexts applicable to the field of biomedicine, such as laboratory research, scientific publications, bioethics, intellectual property, business decisions, entrepreneurship, and visual representation of data. Students will use statistical software to supplement learning and applications of statistics.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 6 credits

**MIIM 518S Foundations of Applied Biomedicine 3.0 Credits**

Introduces the fundamental aspects of normal eukaryotic cell structure, function, and the processes that control cell growth and communication. Emphasis is on cellular macromolecules (i.e., proteins, nucleic acids, polysaccharides and membranes) and how normal cellular processes and regulatory mechanisms can be dysregulated in disease states, such as cancer and infections. Will provide the scientific foundations that can be applied to biomedical innovation and discoveries.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 519S Commercialization of Biomedical Technology 3.0 Credits**

Introduces students to the different stages of the biomedical technology development and commercialization process from ideation or discovery through its delivery to the hands of consumer. Emphasis is given primarily to FDA-regulated biomedical products (i.e., drugs, devices, and diagnostics).

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 520S Science Communication and Outreach 2.0 Credits**

This course is a community-based learning course and combines in-class lectures and discussions with fieldwork. The priorities of the course are two-fold. First, to improve science communication skills with the public and secondly to address the need to dismantle systemic racism in the sciences and build a future that includes a diversified science community. The course is based on current peer-reviewed literature, current events, and societal issues. The student will participate in two outreach initiatives that require on-site visits or virtual synchronous meetings.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 521S Biotechniques I: Molecular and Genomic Methods 2.0 Credits**

A review of the molecular, cellular and computational methods that underlie modern biotechnology, drug discovery and development. The focus is on experimental techniques used to manipulate nucleic acids and to research the interaction of proteins with nucleic acids. Strengths and limitations of the procedures are considered, and their suitability for either a basic or industrial research setting evaluated. Complements MIIM 522S Biotechniques II.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 522S Biotechniques II: Immunological Methods 2.0 Credits**

A review of current immunologically-based experimental techniques and how they are applied to many different areas of research. Provides basic information central to the concepts and techniques pertinent to the study of immunology, the analysis of immune responses, and development of vaccines. Complements MIIM 521S Biotechniques I.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 523S Molecular Virology 2.0 Credits**

This course will provide a comprehensive overview of the molecular aspects of viral pathogenesis, using various host-virus interactions as models.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Restrictions:** Can enroll if major is MMED.

**MIIM 524S Vaccines and Vaccine Development 3.0 Credits**

This course will provide information pertaining to the history of vaccines, the principles of vaccine design, the concepts of induction of the immune protection, and the choice of vaccine types. Emphasis will be given to current and future methods for vaccine design, and approved tests for safety and efficacy. The concepts of prophylactic and therapeutic vaccines will be discussed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 525S Principles of Biocontainment 1.0 Credit**

Explore the conceptual and practical aspects of biosafety and biocontainment. Gain a greater appreciation for the risks posed by human pathogens. Learn about approaches and procedures used to minimize those risks and contain potentially harmful pathogens. Topics covered in the course include: the classification of biological hazards; collection and storage of biohazardous materials; the practicalities of working in biocontainment facilities, and design considerations for biocontainment in the laboratory and in the field.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 527S Immunology, Immunopathology and Infectious Diseases 3.0 Credits**

Explores basic knowledge of immunity from the organism to the cellular level, with a focus on how the immune system elicits protection against invasion by pathogenic organisms, and how these same responses may be damaging to the host.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 528S Structural Bioinformatics 2.0 Credits**

Structural Bioinformatics is an interdisciplinary course designed for students with basic biology background to utilize and integrate novel computational methods in their research program. The course consists of basic molecules of programming in bioinformatics and extends to teach all aspects of protein structure modeling, molecular dynamics simulation, ligand design and optimization and principles of molecular docking. Lectures are supplemented with hands-on sessions.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IDPT 521S [Min Grade: B] or MIIM 530S [Min Grade: B]

**MIIM 530S Fundamentals of Molecular Medicine I 3.0 Credits**

The first of a three-part course series, which provides a foundation in essential topics in biochemistry, cellular and molecular biology and genetics. Focuses on macromolecules (i.e., proteins, nucleic acids, polysaccharides and membranes) and their microenvironment within the eukaryotic cell. It is recommended that students also enroll in MIIM 534S Molecular Medicine Journal Club I for practical application of concepts learned in the analysis and interpretation of original scientific research and data.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 531S Fundamentals of Molecular Medicine II 2.0 Credits**

The second of a three-part course series, which provides a foundation in essential topics in biochemistry, cellular and molecular biology and genetics. Focuses on processes that control eukaryotic cell growth and function, with emphasis on biochemical pathways and regulatory mechanisms, cell cycle, and cellular communication mechanisms. It is recommended that students also enroll in MIIM 533S Molecular Medicine Journal Club II for practical application of concepts learned in the analysis and interpretation of original scientific research and data.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MIIM 530S [Min Grade: B]

**MIIM 532S Fundamentals of Molecular Medicine III 2.0 Credits**

The last of a three-part course series, which provides a foundation in essential topics in biochemistry, cellular and molecular biology and genetics. Focuses on normal organismal development and cancer. Includes significant independent reading of primary scientific literature and writing based on such reading.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MIIM 530S [Min Grade: B] and MIIM 531S [Min Grade: B]

**MIIM 533S Molecular Medicine Journal Club II 1.0 Credit**

In depth discussion of published primary scientific literature. Develop skills to analyze, interpret and represent scientific data in various topics in biochemistry, molecular biology and genetics, with emphasis on mammalian cells. Discussion topics are aligned with topics discussed in MIIM 531S Fundamentals of Molecular Medicine II.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 2 credits

**MIIM 534S Molecular Medicine Journal Club I 1.0 Credit**

Introduction to the journal club format of in depth discussion of published primary scientific literature. Develop skills to analyze, interpret and represent scientific data in various topics in biochemistry, molecular biology and genetics, with emphasis on mammalian cells. Discussion topics are aligned with topics discussed in MIIM 530S Fundamentals of Molecular Medicine I.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 2 credits

**MIIM 535S Biomedical Technology Commercialization I 1.0 Credit**

Introduces students to the different stages in the technology development and commercialization, with emphasis on biomedical technology, drugs, devices, and diagnostics. Topics include identification of assessment of emerging technologies, product development strategy and planning, and regulatory requirements. Through faculty and/or guest speaker presentations, and case studies students will develop skills and knowledge necessary to evaluate the commercial viability of new technologies. This is the first of a two-part course series.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 536S Biomedical Technology Commercialization II 1.0 Credit**

Builds upon the concepts introduced in part I of this course series. Introduces students to the different stages in the technology development and commercialization, with emphasis on biomedical technology, drugs, devices, diagnostics, biomedical communications and gaming. Topics include market and industry analyses, and development and integration of business and commercialization strategies. Through faculty and/or guest speaker presentations, and case studies students will develop skills and knowledge necessary to evaluate the commercial viability of new technologies.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 540S Viruses and Viral Infections 2.0 Credits**

Introduces fundamental concepts in molecular virology through presentation and discussion of viruses that cause disease in humans. Students learn about important aspects of virus infection, including virus structure, replication, molecular pathogenesis, antiviral immune responses, the development of antiviral drug therapies, and the use of viruses in gene therapy. Students also learn to read and critically evaluate virology-related papers published in the primary literature.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 541S Bacteria and Bacterial Infections 2.0 Credits**

Introduces fundamental concepts in bacteria and the infections they cause, including microorganism structure and replication, pathogenesis and treatment.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 542S Mycology and Fungal Infections 2.0 Credits**

Introduces basic aspects of the biology of fungi and fungal infections, such as fungal cell structure, function, replication, pathogenesis, and their impact on humans. Antifungal agents; mode of action and molecular mechanism of resistance are also discussed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 543S Parasitology and Parasitic Diseases 2.0 Credits**

Introduces basic aspects of the biology of parasites and parasitic infections, including microorganism structure, replication and pathogenesis, as well as public health and economic impact of parasitic infections. Antiparasitic drug and vaccine development are also discussed. Primary literature is also read and discussed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 545S Introduction to Infectious Diseases 4.0 Credits**

Introduces known human pathogens that cause infectious diseases of major public health importance. Bacterial, fungal, parasitic, and viral pathogens are comprehensively overviewed, with an emphasis on their transmission, pathogenesis, clinical presentation, prevention, and treatment. Learning materials and approaches are derived from the scientific literature and the medical school curriculum. Offers opportunities for primary literature discussions and evaluation of clinical case studies.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 550S Biomedicine Seminar 3.0 Credits**

A seminar series on diverse topics in biomedicine, public health, technology commercialization and entrepreneurship. Faculty and students meet in an informal way to discuss selected subjects, hear guest speakers or discuss scholarly articles and current news. The topics will vary by session, and range from current events in the biomedical industry, to various aspects of new product development, commercialization, entrepreneurship, and/or technical aspects of new discoveries.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 3 times for 12 credits

**MIIM 555S Molecular Mechanisms of Microbial Pathogenesis 3.0 Credits**

An advanced graduate course involving presentation and in depth discussion of recent and historical literature on the molecular and cellular mechanisms of bacterial pathogenesis. Prerequisite: a previous bacterial pathogenesis or medical microbiology course.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 600S Microbiology and Immunology Thesis Research 9.0 Credits**

Research toward the fulfillment of the dissertation is conducted beginning after successful completion of the qualifying examination. Progress is monitored by the student's advisor and department, Advisory Committee or Thesis Committee.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**MIIM 604S Special Topics in Virology 3.0 Credits**

Emphasis is directed toward the study of mammalian virus-host interaction at the cellular level.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 605S Experiential Learning 2.0-6.0 Credits**

Provides practical experience in various areas related to biomedicine (e.g., research, business, entrepreneurship, law, digital media, public health). Students participate in planning and selecting the type of experiential learning that best fits their career plans and professional needs.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 606S Microbiology and Immunology Seminar 1.0 Credit**

Faculty and students meet in an informal way to discuss selected subjects, hear guest lecturers or explore topics related to the biomedical sciences of interest to the group.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**MIIM 607S Immunology II 3.0 Credits**

This is an advanced course in immunology covering various aspects of contemporary cellular and molecular biology. It consists of some didactic sessions followed by reading and discussion of current literature. The prerequisites for this course are a graduate level course in immunology and permission of the instructor.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 613S Emerging Infectious Diseases 2.0 Credits**

In depth discussion of the emergence and spread of infectious agents, including species jumping, mutation and global transport. Learn about recently emerged pathogenic agents as well as possible future outbreaks or reemergence of viral, bacterial, parasitic and novel agents.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit



**MIIM 615S Experimental Therapeutics 2.0 Credits**

In-depth discussion of experimental and emerging therapies for human disease, with emphasis on infectious disease. Analysis of key developments and approaches in drug design representative of experimental therapeutics is presented, with inclusion of pharmacologic, regulatory and basic science perspectives.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 621S Biomedical Research I 2.0-3.0 Credits**

Provides hands-on research experience in the broad field of molecular medicine. Student projects will focus on basic, translational, or clinical biomedical research. Host laboratories will be chosen on the basis of their research, as well as student interests and future career goals. While emphasis will be placed on laboratories within Drexel University, research may also be completed in laboratories at other academic institutions or at sites outside of Drexel University involved in molecular medicine research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 6 credits

**MIIM 622S Biomedical Research II 2.0-3.0 Credits**

Provides hands-on research experience in the broad field of molecular medicine. Student projects will focus on basic, translational, or clinical biomedical research. Host laboratories will be chosen on the basis of their research, as well as student interests and future career goals. While emphasis will be placed on laboratories within Drexel University, research may also be completed in laboratories at other academic institutions or at sites outside of Drexel University involved in molecular medicine research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 6 credits

**MIIM 625S Advanced Molecular Virology 3.0 Credits**

Provides a comprehensive overview of the molecular aspects of viral pathogenesis and viral-host interactions, using various viral families and selected viruses as models. Builds upon basic concepts introduced in MIIM 512S Molecular Pathogenesis I or MIIM 540S Viruses and Viral Infections.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 630S Advanced Molecular Biology 2.0 Credits**

Advanced level course (lecture and discussions) of topics of current interest in the area of molecular biology and molecular genetics. Topics vary in different years and may include aspects of both lower eukaryotic systems and mammalian systems. May be repeated once for credit.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 2 credits

**MIIM 631S Biomedical Innovation Development and Management 5.0 Credits**

An interdisciplinary capstone course. Students select a biomedical technology, and apply concepts and skills learned throughout the program to develop a full-length technology development and commercialization plan. Students are expected to conduct significant independent research throughout the course to complete this project.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MIIM 518S [Min Grade: B] and MIIM 519S [Min Grade: B]

**MIIM 640S Effective Teaching Skills 1.0 Credit**

This eight-week course is designed to help doctoral candidates in the biomedical science become better teachers. Participants are introduced to behaviors and techniques used by effective teachers and are given the opportunity to make several presentations. Each presentation is videotaped and positive feedback is given to the presenter by other members of the class.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 645S Biomedical Career Explorations 2.0 Credits**

This is an open forum for students, faculty and guest speakers to discuss career paths in biomedicine. It will explore traditional biomedical careers such as academia, biotechnology and private industry, as well as less traditional career paths such as bioentrepreneurship, intellectual property law, biomedical communications and media, among others. Students will also have an opportunity to work on their resumes and other job-readiness skills.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 3 times for 8 credits

**MIIM 650S Research Internship in Molecular Medicine 4.0-6.0 Credits**

Provides laboratory-based or other forms of research experience in the broad field of molecular medicine. Student projects will focus on basic, translational, or clinical biomedical research. Internship hosts will be chosen on the basis of their research, as well as student interests and future career goals. Students will also gain experience with analyzing data that they help to generate or that they gather from the literature, as well as presenting that information in written and oral formats. Internships are primarily completed within laboratories at Drexel University. Requests for off-site internships and enrollment for less than 6 credits require course director approval.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 12 credits

**MIIM 651S Research Internship in Immunology 4.0-6.0 Credits**

Provides laboratory-based or other forms of research experience in the field of immunology. Student projects will focus on basic, translational, or clinical biomedical research. Internship hosts will be chosen on the basis of their research, as well as student interests and future career goals. Students will also gain experience with analyzing data that they help to generate or that they gather from the literature, as well as presenting that information in written and oral formats. Internships are primarily completed within laboratories at Drexel University. Requests for off-site internships and enrollment for less than 6 credits require course director approval.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 12 credits

**MIIM 652S Research Internship in Infectious Disease 4.0-6.0 Credits**

Provides laboratory-based or other forms of research experience in the field of infectious disease. Student projects will focus on basic, translational, or clinical biomedical research. Internship hosts will be chosen on the basis of their research, as well as student interests and future career goals. Students will also gain experience with analyzing data that they help to generate or that they gather from the literature, as well as presenting that information in written and oral formats. Internships are primarily completed within laboratories at Drexel University. Requests for off-site internships and enrollment for less than 6 credits require course director approval.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 12 credits

**MIIM 653S Clinical Correlations in Infectious Disease 3.0 Credits**

This course will serve as an advanced learning experience to correlate the basic aspects of infection with the clinical aspects of diagnosis and treatment. The course will introduce concepts that relate to understanding how the clinical aspects of infectious diseases can be translated into basic research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 654S Clinical Correlations in Immunology 3.0 Credits**

This course will serve as an advanced learning experience to correlate the basic aspects of immunology & immunopathology with the clinical aspects of diagnosis and treatment. The course will introduce concepts that relate to understanding how the clinical aspects of abnormal immune responses and immunodeficiencies can be translated into basic research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 655S Emerging Biomedical Interventions for Human Disease 2.0 Credits**

An advanced course that focuses on emerging biomedical interventions for human diseases. Includes in-depth discussions and analyses of experimental and emerging approaches for treating or preventing disease and infections by human pathogens. Students learn about important aspects of each featured experimental therapeutic or preventative approach, including its premise, key developmental milestones, current applications, and future potential. Students are also guided through critical analyses of these approaches and technologies to identify significant strengths and weaknesses.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MIIM 660S Current Concepts in Molecular Medicine I 3.0 Credits**

This advanced course provides topical information that builds on the comprehensive basic knowledge underlying molecular medicine, as taught in the course sequence of Fundamentals of Molecular Medicine I and II (MIIM-530, and -531).

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** MIIM 531S [Min Grade: B] (Can be taken Concurrently)MIIM 530S [Min Grade: B]

**MIIM 9754S Microbiology Research 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**MIIM T580S Special Topics in Microbiology & Immunology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**MIIM T680S Special Topics in Microbiology & Immunology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

# MMS Prog. - Masters in Med. Science

## Courses

### MMSP 501S Research in Medical Science I 6.0 Credits

Research in Medical Science is a two-semester sequence that partners with MMSP-503S and MMSP-504S to extend and enrich the research experience for second year MMS students. Students will engage in original, hands-on research under the guidance of a mentor scientist. A Research Proposal will be developed in collaboration with the Research Mentor and submitted for timely review and approval to the Oversight Committee, comprising faculty within the Graduate School. Once approved, the student will pursue the research project proposed under the direct supervision of their research mentor.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 12 credits

### MMSP 502S Research in Medical Science II 6.0 Credits

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MMSP 503S Research Seminar I 3.0 Credits

Research seminar is a two-semester sequence that partners with MMSP-501-S to extend and enrich the research experience for MMS students. In seminar, students will have a forum to discuss their ongoing research projects in a rigorous but supportive environment. Students will be challenged to present their research in several formats as described below. Further, students will be expected to provide constructive but critical peer-reviews of each other's in-class presentations.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 9 credits

### MMSP 504S Research Seminar II 3.0 Credits

Research seminar is a two-semester sequence that partners with MMSP#502#S to extend and enrich the research experience for MMS students. In seminar, students will have a forum to discuss their ongoing research projects in a rigorous but supportive environment. Students will be challenged to present their research in several formats. Further, students will be expected to provide constructive but critical peer-reviews of each others in-class presentations.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 9 credits

**Prerequisites:** MMSP 503S [Min Grade: C]

### MMSP 505S Introduction to Biomedical Research 2.0 Credits

Introduction to Biomedical Research is a 2-credit research course that permits the MMS student to extend their research experience under the tutelage of their research mentor. Fall-starting students would be able to begin their research experience in the spring of their first year. Spring-start MMS students would be able to begin their research experience fall of their second semester. The course provides students with a structured, but limited, introduction to their lab of choice. The student can use this time to develop their research proposal and begin learning necessary techniques required for their research studies.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MMSP 510S Lab Tech In Bioc & Molec Biol 2.0 Credits

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MMSP 520S Medical Pathology I 6.0 Credits

This course serves as a bridge between the basic sciences and clinical material. The course material enables the student to learn the language of human disease and provides a knowledge base relating to the mechanisms of disease and the approach to a pathologic diagnosis. Following several introductory sessions, where basic pathological processes are introduced, the course is taught in an organ system approach.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MMSP 521S Medical Pathology II 4.0 Credits

The purpose of the course in Pathology and Laboratory Medicine is to serve as a bridge between the basic sciences and clinical material. With this in mind, the course attempts to enable the student to recognize and understand the diseases that are encountered in clinical practice.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 8 credits

**Prerequisites:** MMSP 520S [Min Grade: C]

### MMSP 530S Selected Topic in Pharmacology 7.0 Credits

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MMSP T580S Special Topics in Medical Science 1.0-6.0 Credit

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

# Molecular & Cellular Bio & Genetics

## Courses

### MCBG 501S MCBG 1st Lab Rotation 4.0 Credits

First rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MCBG 502S MCBG 2nd Lab Rotation 4.0 Credits

Second rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MCBG 503S MCBG 3rd Lab Rotation 4.0 Credits

Third rotation. Guided research is conducted on a part-time basis for two or three week periods. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MCBG 506S Advanced Cell Biology 2.0 Credits

This course is designed to introduce the student to current research topics and latest developments in the area of Cell Biology. Topics may include ion transport, signal transduction and apoptosis, cytoskeleton, protein translocation and sorting, protein kinases and phosphatases, cell motility and membrane biogenesis. Topics may vary in different years.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MCBG 510S MCBG Journal Club 1.0 Credit

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 15 times for 100 credits

### MCBG 512S MCBG Journal Club 1.0 Credit

This course is designed to have students read and critically analyze recent research in the fields of molecular biology, cell biology, and genetics. Each week a student will choose a high-impact paper of broad significance published within the last two years for presentation. All students are expected to have read the paper prior to the meeting and will participate in a roundtable discussion of the data presented in the figures and the authors' conclusions. Various faculty members from the MCBG program will serve as moderators or facilitators during the group discussion. This course is required for students in the MCBG MS and PhD programs until permission for thesis writing is granted.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

### MCBG 513S Molec & Cell Biology Seminar 1.0 Credit

Faculty and students meet in an informal way to discuss selected subjects, hear guest lectures or explore topics related to the biomedical science of interest to the group.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

### MCBG 514S Cell Cycle and Apoptosis 2.0 Credits

The main goal of this advanced course is to provide an in-depth molecular understanding of the principles of cell growth and cell death. This course will build upon basic information taught in the Molecular Cell Biology and Genetics Module of the Biomedical Sciences first year graduate core curriculum and intended for advanced graduate students (2nd yr. and higher) looking for further understanding in the fields of cell cycle and apoptosis. This course will also emphasize advanced topics and methods not in the core.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

### MCBG 600S MCBG Thesis Research 9.0 Credits

Research toward the fulfillment of the dissertation is conducted beginning after successful completion of the qualifying examination. Progress is monitored by the student's advisor and department, Advisory Committee or Thesis Committee.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 15 times for 150 credits

### MCBG 601S MOLE & CELL BIO & GENE SEMINAR 1.0 Credit

Faculty and students meet in an informal way to discuss selected subjects, hear guest lectures or explore topics related to the biomedical science of interest to the group.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 10 times for 50 credits

### MCBG T580S Special Topics in Molecular and Cell Biology and Genetics 0.0-12.0 Credits

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**MCBG T680S Special Topics in Molecular and Cell Biology and Genetics 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Molecular Basis of Cancer

### Courses

**CMCA 500S Foundations in Bioscience 1 3.0 Credits**

Biology ultimately depends upon the molecular processes that occur within cells. This course introduces you to the foundational concepts in molecular and cell biology and biochemistry. We begin with the key players: The biomolecules used to construct and operate cells. We next consider the Central Dogma, which reveals how the cell builds new molecules (and thereby allows it to copy itself). Finally, we cover the basics of cell biology, providing context in which students can understand the stage upon which these processes play out. These concepts provide a fundamental knowledge base that will support learning at the cutting edge of bioscience.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CMCA 501S Foundations in Bioscience 2 3.0 Credits**

Biology ultimately depends upon the molecular processes that occur within cells. This course continues the introduction of foundational concepts in molecular and cell biology and biochemistry begun in CMCA 500S. We begin by exploring cell biology, the movement of cellular constituents and of entire cells, how cells age, as well as how they fuel and renew themselves. Next, we apply our fundamental knowledge to questions relating to inheritance and disease. Finally, we turn our attention to technology, to provide insights into the techniques used to generate the fundamental knowledge that we study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CMCA 510S Introduction to Cancer Biology 2.0 Credits**

This course provides a broad-based introduction to the field of cancer biology. The course focuses on mutations in enzymes that alter activity, modulation of transcription and translation in cancer cells, defects in DNA damage repair pathways, rewiring of signal transduction pathways, and alterations in cell cycle regulation. The majority of the course is discussion-based and focuses on analysis of primary literature, with an emphasis on training students in critical reading of primary scientific research reports. Topics will parallel those covered in the Foundations in Bioscience 1 course, but from a cancer biology-relevant perspective.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CMCA 520S Molecular Basis of Cancer 3.0 Credits**

The goal of this course is to promote learning and intellectual development in the area of cancer biology. This course will provide a comprehensive overview of the biology and pathology of cancer. This course will educate students on the principles of cancer biology, including the genetic and molecular changes normal cells undergo during transformation into malignant cancer cells. We explore the role of mutations in cancer cells, and how they lead to the dysregulation of essential biological properties like programmed cell death, growth and migration. We compare classical with newer treatment strategies such as targeted therapies and immune therapies. We also explore the challenges associated with preventing and diagnosing cancers.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CMCA 551S Control of the Cell Cycle and Cell Death 2.0 Credits**

This course focuses on recent advances in our understanding of the Cell Cycle and Cell Death. Control of the cell cycle is essential for proper cell proliferation. Similarly, controlled cell death, or apoptosis, is important for removing cells that are sick or defective. Dysfunction of these processes is fundamental to many mechanisms of cancer development and clinical treatment. The course is run as a discussion-based format that focuses on primary literature pertaining to breakthroughs or new methods related to Cell Cycle and Cell Death.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CMCA 552S Experimental Approaches in Cancer Research 2.0 Credits**

To truly understand primary research reports, you must have some understanding of the methods used. In this course, you will learn about widely used bench-based research methods that are useful for researchers studying the molecular basis of cancer. These methods will be covered using a combination of lectures, study exercises, and first-person demonstrations of the methods in action. The research methods covered include bioinformatic, molecular, cellular, and animal models. To allow students to tailor the course to their specific interests and needs, the course is structured around a menu of modules in which different methods are presented.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**CMCA T580S Special Topics in the Molecular Basis of Cancer 1.0-5.0 Credit**

Course consists of content that faculty or students have requested to meet special needs or interests. Content is variable and offered on a one-time, infrequent, or trial basis. Actual course description will be determined by the instructor. May be repeated up to 4 times for credit if topics vary.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

# Neurology

## Courses

**NEUL 8012S Neurology\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8013S NEUROLOGY - 3WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8014S NEUROLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8015S Neurology Clerkship 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 801S NEUROLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8212S Acute Stroke/NeuroIntensive 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8214S ACUTE STROKE/NEUROINTENSIVE CA 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 821S SLEEP MEDICINE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8222S CLINICAL NEUROLOGY - 2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8224S Clinical Neurology 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8234S NEUROLOGY SUBINTERNSHIP 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**NEUL 8242S Outpatient Neurology\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8244S Outpatient Neurology 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 824S CLINICAL NEUROLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8254S COGNITIVE NEUROLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8258S Cognitive Neurology 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 827S EPILEPSY SUBSPECIALTY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 830S CHILD NEUROLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8318S RESEARCH-DEMENTIA & AGING-8WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 831S CHILD NEUROLOGY-2 WEEKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 832S NEUROMUSCULAR DISORDERS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 834S ACUTE STROKE/NEUROINTENSIVE CA 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8362S Principles in Neurology\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 837S NEURO-OPHTHALMOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 838S PAIN MANAGEMENT 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8412S EPILEPSY SUBSPECIALTY - 2 WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8414S EPILEPSY SUBSPECIALTY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8422S Epilepsy and EEG 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated multiple times for credit

**NEUL 8512S MOVEMENT DISORDER - 2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUL 8514S MOVEMENT DISORDER 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 8612S NEUROMUSCULAR DISORDERS - 2WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 8614S Neuromuscular Disorders 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**NEUL 8714S NEURO - OPHTHALMOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 8814S PAIN MANAGEMENT 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 8912S CHILD NEUROLOGY - 2 WEEKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**NEUL 8914S CHILD NEUROLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 902S NEUROLOGY SUBINTERNSHIP 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 903S SUBSPECIALTY HEADACHE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 904S RESEARCH-DEMENTIA & AGING-8WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 9092S Elective - Neurology\*\*\* 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 9094S ELECTIVE - NEUROLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 9098S ELECTIVE - NEUROLOGY 8WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 9754S RESEARCH - NEUROLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 9756S RESEARCH - NEUROLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 9758S RESEARCH- NEUROLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**NEUL 9764S RESEARCH - NEUROEPIDEMIOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit

## Neuroscience

### Courses

**NEUR 500S Statistics for Neuro/Pharm Research 2.0 Credits**

This course will provide hands on instruction in how research data are managed and analyzed in neurobiological research. Studies will acquire a basic statistical knowledge with emphasis on application to data sets similar to what they can expect to encounter in their thesis research. Instruction in the use of statistical programs will be included.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**NEUR 501S Neuroscience 1st Lab Rotation 4.0 Credits**

First laboratory rotation. Guided research is conducted on a part-time basis for two or three 10-16 week periods. Rotations are generally conducted during fall, spring and summer of the first and second years. An oral presentation highlighting the background, rationale, methods, results and discussion of the research activity is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**NEUR 502S Neuroscience 2nd Lab Rotation 4.0 Credits**

Second laboratory rotation. Guided research is conducted on a part-time basis for two or three 10-16 week periods. Rotations are generally conducted during fall, spring and summer of the first and second years. An oral presentation highlighting the background, rationale, methods, results and discussion of the research activity is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**NEUR 503S Neuroscience 3rd Lab Rotatin 4.0 Credits**

Third laboratory rotation. Guided research is conducted on a part-time basis for two or three 10-16 week periods. Rotations are generally conducted during fall, spring and summer of the first and second years. An oral presentation highlighting the background, rationale, methods, results and discussion of the research activity is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit

**NEUR 505S ADVANCED MOLECULAR NEUROBIOLOGY. 1.0 Credit**

This is a graduate course aimed to discuss basic concepts and state-of-the-art techniques in molecular neurobiology. The course also serves as a forum for all members of the Graduate Program in Neurobiology, including faculty, graduate and post-doctoral students, and technical staff, to discuss recent developments in molecular neurobiology. The class meets once a month. Some meetings focus on basic concepts and recent findings in the field, whereas others examine novel biotechniques. The discussion is led by a speaker, who in most cases is a faculty member from the Department of Neurobiology and Anatomy. Occasionally, specialists from other institutions are invited to speak on a particular subject. Students taking the course for credits will be asked to lead one section in a related subject of their choice. Full attendance is required.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**NEUR 508S Graduate Neuroscience I 2.5 Credits**

This course is offered to incoming first year Neuroscience graduate students and covers the basic tenets of Developmental Neuroscience as well as providing a historical context to the progression of Neuroscience as a field of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**NEUR 511S Advanced Cellular and Developmental Neuroscience 1.0 Credit**

This course provides didactic teaching and in-depth discussion of topics in cellular and developmental neuroscience. Topics will emphasize the most recent and contemporary issues in the field.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**NEUR 512S Advanced Systems and Behavioral Neuroscience 1.5 Credit**

This course provides an in-depth understanding of cellular and systems neurophysiology. Topics include: basic mechanisms, emergent network activities, sensory processing, and models of learning and memory. May be repeated once for credit.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 1 times for 3 credits

**NEUR 520S Neurobiology Topics I 2.0 Credits**

Neurobiology topics is a "journal club" course required of all Neuroscience graduate students beginning in the second year. Students, faculty and staff from Neuroscience and other programs are also encouraged to attend as registered or non-registered participants. The course is offered in the Fall and Spring semesters. Students choose topics of interest and a faculty member conducting research in this field is invited to introduce the topic, either from Drexel University or another local university. Students then present research papers in this area to the class to refine their presentation skills, practice critical thinking, and learn about recent research. Recent topics chosen by the class have included: Analysis of Somatosensory Systems, Neuroimmunology, Neurodegenerative Diseases, and Axon Guidance.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**NEUR 521S Neurobiology Topics II 2.0 Credits**

This journal club style course is designed as an exchange of scholarly information through presentation and group discussion of published novel, impactful, and/or controversial neuroscience research that is of interest. It will cover the breadth and depth of neuroscience including molecular, cellular and systems neuroscience.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**NEUR 600S Neuroscience Thesis Research 9.0 Credits**

Research toward the fulfillment of the dissertation is conducted beginning after successful completion of the qualifying examination. Progress is monitored by the student's advisor and department, Advisory Committee or Thesis Committee.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**NEUR 602S Medical Neuroscience 6.0 Credits**

This course will provide extensive information regarding structure and function relationships in the central nervous system. It will also provide introductory information on neurophysiology, cellular neuroscience and systems neuroscience topics.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit



**NEUR 607S INTEGRATED NEUROSCIENCE 4.0 Credits**

This is a core course required of all graduate students in the Neuroscience Program. The prerequisite is completion of Medical Neuroscience. The course meets twice weekly during the fall semester for 2 hour sessions, which include a mix of lecture and discussion. The course emphasizes critical evaluation of experimental methods used for investigation problems in the organization and function of the central nervous system. One major goal of the course is to teach the students a system approach to analyzing the CNS control of behavior and physiology. The topics that are chosen to illustrate these principles of organization include sensorimotor integration; CNS development; neurochemical anatomy: sites and mechanism underlying regulation of ingestion, responses to stress and sexual behavior: central mechanisms of award, learning and memory: and recovery of function after CNS damage. An important second goal is to relate activity at the systems level to underlying cellular and molecular mechanisms. These strategies discussed throughout the course but especially in development; genetic basis of psychopathology: CNS injury and recovery; and use of molecular techniques for modulating behavior. The students are required to write four papers covering information from four separate blocks of the course and one final paper comparing the uses of transgenic knockouts, inducible knockouts and antisense approaches for studying a system of the student's choice. These papers are read by the faculty and defended by the students.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 0 times for NaN credits

**NEUR 609S Graduate Neuroscience II 4.0 Credits**

Graduate Neuroscience II is didactic in nature with neurological disease as the basis for understanding concepts in Cellular Neuroscience (module I), Systems Neuroscience (module II) and Behavioral Neuroscience (module III).

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**NEUR 615S ADVANCED SPEC. TOPICS IN NEURO 1.0-3.0 Credit**

Graduate students present current research papers in the general areas of systems and behavioral neurobiology.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**NEUR 634S MOTOR SYSTEMS 4.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**NEUR 8214S NEUROSCIENCE SENIOR ELECTIVE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUR 900S NEUROSCIENCE RESEARCH 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUR 901S NEUROSCIENCE SENIOR ELECTIVE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**NEUR 9096S ELECTIVE - NEUROSCIENCE 6WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUR 9750S RESEARCH - NEUROSCIENCE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUR 9754S RESEARCH - NEUROSCIENCE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NEUR T580S Special Topics in Neuroscience 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**NEUR T680S Special Topics in Neuroscience 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Neurosurgery

### Courses

**NESU 8212S NEUROSURGERY - 2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**NESU 8213S Neurosurgery 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NESU 8214S NEUROSURGERY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NESU 8222S ELEC./NEUROSURG PRIMCARE 2WS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**NESU 8224S NEUROSURG FOR PRIM CAREGIVERS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**NESU 8226S NEUROSURG FOR PRIM CAREGVR.6WK 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NESU 8272S NEUROSURGERY-PEDS /ADULT- 2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**NESU 827S NEUROSURG FOR PRIM CAREGIVERS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**NESU 8314S Neurosurgery Subl-Cranial 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**NESU 8414S Neurosurgery Subi-Spinal 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**NESU 854S NEUROSURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**NESU 855S NEUROSURGERY RESEARCH 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**NESU 895S ELECTIVE - NEUROSURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**NESU 9094S ELECTIVE - NEUROSURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**NESU 9750S Research - Neurosurgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**NESU 9754S RESEARCH - NEUROSURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

## Obstetrics & Gynecology

### Courses

**OBYG 795S Obstetrics and Gynecology: Post Year 1 Research Elective 0.0 Credits**

OBYGN research experience taken after completion of first year of medical school.

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**OBYG 8010S OBSTETRICS & GYNECOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8015S OB/GYN Clerkship 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 801S OBSTETRICS & GYNECOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8112S AMBULATORY OB/GYN - 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**OBYG 8114S Ambulatory OB/GYN 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8122S Amb GYN Infect Dis 1.0 Credit**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8124S Amb GYN-Infectious Disease 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**OBYG 8154S PRIMARY OB/GYN 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8172S GENERAL GYN - 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8174S Genery Gynecology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8212S SUBINTERNSHIP IN OB/GYN-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8214S OB/GYN Subinternship 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8232S GENERAL OB/GYN - 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**OBYG 8234S General OB/GYN 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 823S OB/GYN SUBINTERNSHIP 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8264S Gynecological Subinternship 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 8274S Obstetrical Subinternship 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 827S GYNECOLOGIC ONCOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 828S INPATIENT SERVICE GYNECOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBGY 830S OB/GYN, POCONO 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8312S Maternal Fetal Medicine-2 Wks. 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8314S MATERNAL/ FETAL MEDICINE 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8322S PERINATAL MEDICINE - 2WKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**OBGY 8324S PERINATAL MEDICINE 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**OBGY 832S PERINATAL MEDICINE 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8334S ANTENATAL FETAL ASSESSMENT 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 833S ANTENATAL FETAL ASSESSMENT 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 835S REPRODUCTIVE ENDOCRIN/INFERT 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 837S PELVIC FLOOR DISORDERS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8411S REPROD ENDOCRIN/INFERT- 1 WEEK 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8412S REPROD ENDOCRIN/INFERT - 2WKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8413S REPROD ENDOCRIN/INFERT- 3WEEKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8414S REPRODUCTIVE ENDOCRIN/INFERT 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 841S REPROD ENDOCRIN/INFERT-1 WEEK 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 843S REPROD ENDOCRIN/INFERT-3 WEEKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8504S OB/GYN Subinternship 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8514S PELVIC FLOOR DISORDERS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8612S Urogynecology - 2WKS (S/U) 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8614S UROGYNECOLOGY 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8712S Gynecology Oncology-2 Wks. 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8713S Gynecology Oncology 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8714S Gyn Oncology Subinternship 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8774S Women's Health - Clinical 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 8814S GYN MINIMALLY INVASIVE SURGERY 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**OBGY 895S ELECTIVE-OB/GYN 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 9092S Ob/Gyn Elective\*\*\* 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 9093S ELECTIVE-OB/GYN- 3WKS. 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**OBGY 9094S ELECTIVE - OB/GYN 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBGY 9098S ELECTIVE - OB/GYN - 8WKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**OBYG 932S AMBULATORY OB/GYN 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 940S MATERNAL/ FETAL MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 941S OB/GYN RESEARCH 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 9744S ELEC-CLINICAL RESEARCH 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG 9750S RESEARCH-OB/GYN 10 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**OBYG 9752S RESEARCH-OB/GYN -2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**OBYG 9754S Research - OB/GYN 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG S514S Female Pelvic Med&Recon Surg 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**OBYG S814S High Risk Obstetrics/MFM 0.0 Credits**

This elective is designed for the student who has decided on a career in obstetrics and gynecology. It affords the opportunity to follow high risk pregnancies from initial prenatal assessment and counseling throughout pregnancy and intrapartum course. The Maternal Fetal Special Care Unit is a unique intensive care unit designed to handle all medical, surgical, and obstetric complications of pregnant women and their fetuses.

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**OBYG S824S Breastfeeding Elective 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OBYG S834S Ultrasonography 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

## Office of Medical Education

### Courses

**OMED 8010S Intersession I\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 8012S TRANSITION TO RESIDENCY - 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 8014S Transition to Clinician\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 8016S Clerkship Fundamentals 0.0 Credits**

This six-week course serves as an introduction to the clinical clerkships and seeks to equip students with the basic skills needed to succeed in the clinical years. This course will reinforce clinical skills including history-taking, note-writing and physical exam, as well as introduce broader topics relevant to modern clinical practice, such as usage of evidence-based medicine, management of psychosocial aspects of patient care, and practical approaches to common clinical conditions. This course will also address topics unique to being a clerkship student, including the need to balance studying, participation in clinical care, and emotional well-being.

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 8212S TEACH COMMUNICATION SKLS-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 821S TEACH COMMUNICATION SKLS-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 8222S TEACHING CLIN SKILLS EXAMS-2WK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 822S TEACHING CLIN SKILLS EXAMS-2WK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 8232S TEACH HX TAKING&PHYS EXAMS-2WK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 823S TEACH HX TAKING&PHYS EXAMS-2WK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 8242S ED COMMUN-COMP/SCHOLARLY-2WK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 824S ADVANCED CLINICAL SKILLS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 8252S EVIDENCE BASED MEDICINE-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 825S EVIDENCE BASED MEDICINE-2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**OMED 8264S ED COMMUN-INTERPERONAL SKILLS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 826S ED COMMUN-INTERPERSONAL SKILLS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**OMED 8272S ED COMMUN-COMP/SCHOLARLY-2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 827S ED COMMUN-COMP/SCHOLARLY-2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**OMED 8282S TEACHING ASSIST TUTOR PRGM.2WK 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8284S ACAD.ELECT MED ED-PBLFAC-2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8292S ACAD.ELECT MED ED-PBLFAC-2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**OMED 8312S ACAD ELECT/CLINICAL SKILLS-2WK 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**OMED 8322S TEACH CLIN SKILLS YR2 PIL-2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8334S Independent Scholarship Elec. 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated multiple times for credit

**OMED 8342S Teach Clin Skills to PIL\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8412S MEDIA &PUBLIC HLTH ISSUES -2WK 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**OMED 8413S MEDIA & PUBLIC HEALTH ISSUES 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8414S CHANNEL 6 HEALTH CHECK 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**OMED 8432S Advanced Trial Advocacy- Law and Medicine 0.0 Credits**

This course will consist of 7 weeks of 2-hour substantive demonstration/ performance classes that will take place from 6-8pm on Tuesdays. ATA Law and Medicine utilizes a mixed classroom model bringing together medical students and law students to facilitate analysis of medical malpractice cases from both the legal and medical perspectives. In the 2-hour class, students will learn how to analyze medical malpractice cases and prepare medical witnesses for depositions and trial. The topics of the course are based on advanced trial advocacy tactics, including opening and closing statements, direct, cross and redirect examination of lay and expert witnesses, and witness preparation.

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8462S MINI MEDICAL SCHOOL-2 WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8500S MD/MBA PRACTICUM - 12 WEEKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8522S Simulation Elective\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8632S Projects in Med Education\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8682S Academic Admin. Elec-2wks. 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8714S GYNECOLOGY ONCOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8752S Translational Research\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8812S Admin Perspective for Phys\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 8822S Healthcare Administration\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**OMED 9092S MEDICAL EDUC ELECTIVE-2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 9094S MEDICAL EDUC ELECTIVE - 4 WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OMED 9096S MEDICAL EDUC ELECTIVE - 6WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED 9752S APPL OF RESEARCH METH - 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**OMED T980S Special Topics in Medicine 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

## Orthopedics

### Courses

**ORTH 3104S METABOLIC BONE DISEASE & AMP; 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 795S Orthopaedics: Post Year 1 Research Elective 0.0 Credits**

Orthopaedics research elective taken summer after year 1.

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**ORTH 8212S Orthopaedic Surgery\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8213S Orthopaedic Surgery - 3wks 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8214S Orthopaedic Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8216S ORTHOPAEDIC SURGERY - 6WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8222S GENERAL ORTHOPAEDICS - 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8224S General Orthopaedics 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8332S PED ORTHOPEDIC SURG-2WKS (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**ORTH 8334S Pediatric Orthopaedic Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8414S SPINAL DISEASE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8432S Ortho/Podiatric Surgery\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8434S Orthopaedics/Podiatric Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 8512S SPORTS MEDICINE - 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**ORTH 8514S SPORTS MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 857S GENERAL ORTHOPEDICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 858S GENERAL ORTHOPAEDICS - 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 862S ORTHOPAEDIC SURGERY - 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 863S ORTHOPAEDIC SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 895S ORTHOPEDICS ELECTIVE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 9091S Elective-Orthopaedics\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**ORTH 9092S ELECTIVE-ORTHOPEDICS- 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**ORTH 9094S ORTHOPEDICS ELECTIVE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 954S SPINAL DISEASE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 957S PEDIATRIC ORTHOPAEDIC SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**ORTH 958S PED ORTHOPAEDIC SURG - 2 WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**ORTH 959S SPORTS MEDICINE-2 WEEKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**ORTH 960S SPORTS MEDICINE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**ORTH 961S ORTHOPAEDIC RESEARCH 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**ORTH 9754S RESEARCH - ORTHOPAEDICS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**ORTH 9758S RESEARCH-ORTHOPAEDICS 8WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit

## Otolaryngology

### Courses

**OTO 600S General Otolaryngology 3.0 Credits**

This course introduces students to basic concepts in diagnoses and treatments of common ear, nose and throat disorders as well as emergent conditions encountered frequently. It includes didactic training in infectious diseases of the head and neck, sudden deafness, epistaxis ear ache, sore throat and other maladies. This course includes lectures and individually supervised clinical encounters.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**OTO 601S Otology 3.0 Credits**

The student is introduced to embryologic development, anatomy, physiology and functions of the external, middle and internal ear.

Concepts in the diagnosis and treatment of common pathologic conditions of the ear including hearing loss, dizziness, tinnitus, otitis externa, otitis media, chronic ear disease, mastoiditis, cholesteatoma, labyrinthitis, otosclerosis, sudden deafness and congenital conditions are addressed. It includes didactic training I facial nerve and 8th cranial nerve function and abnormalities, autoimmune training in facial nerve and 8th cranial nerve function and abnormalities, autoimmune.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**OTO 602S Head and Neck Oncology 3.0 Credits**

This course introduces the student to the biology, pathology, diagnosis, treatment and prognosis of head and neck neoplastic disease. It includes didactic training in radiation therapy, immunotherapy, chemotherapy and surgery; combined use, indications and contraindications of treatment with an emphasis on acute management and long-term follow up. Tumor classification according to the American Joint Commission Guidelines will be covered. Complications of treatment and non-treatment including carotid artery.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**OTO 603S Pediatric Otolaryngology, Introduction 3.0 Credits**

This course contains essential information for post-doctoral training (post-M.D. or D.O.) necessary for specialization, and as core knowledge for an academic physician in otolaryngology.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**OTO 604S Journal Club in Otolaryngology 1.0 Credit**

This course is intended to introduce students to critical analysis of published literature. Articles will be assigned in advance and discussed in journal club. The articles will be selected by faculty. Some will be chosen for excellence. Others will be chosen for flaws in scientific design that cast doubt on their validity and probably should have precluded their publication. Students will take turns presenting papers and critiquing them, with the guidance of faculty.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 5 times for 5 credits**OTO 605S Laryngology – Voice, Introduction 3.0 Credits**

This course introduces the student to current concepts in anatomy and physiology of phonation, techniques for history and physical examination in patients with voice complaints and common diagnoses and treatments in patients with voice disorders. Voice therapy is introduced. The course includes didactic lectures and individually supervised clinical encounters.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**OTO 606S Laryngology – Voice, Advanced 3.0 Credits**

This course introduces the student to advanced concepts in voice management including objective voice assessment, stroboscoped laryngoscopy, high-speed laryngeal imaging and related technology. Avenues for voice research also are discussed. Advanced office-based care is included, including indirect laryngeal surgery, office-based laser surgery, EMG guided Botulinum Toxin injection and other techniques.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**Prerequisites:** OTO 605S

**OTO 607S Laryngology – Swallowing 3.0 Credits**

The student is introduced to anatomy and physiology of deglutition, as well as diagnoses and treatments of swallowing disorders. Techniques addressed include functional endoscopic evaluation of swallowing and sensory function (FEESST), three-phase barium swallow, transnasal esophagoscopy and esophageal manometry, among others.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 608S Temporal Bone Dissection 3.0 Credits**

This intensive, hands-on course includes didactic lectures, evaluation of histology and imaging studies, and extensive supervised cadaver dissection. All students will complete a variety of cadaver dissections including mastoidectomy, translabyrinthine craniotomy, middle fossa approach to the internal auditory canal, stapedectomy, cochlear implantation and others.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 609S Neurotology 3.0 Credits**

This course is designed to introduce the student to conditions of the inner ear and ear-brain interface. Didactic lectures introduce concepts in the diagnosis and treatment of vertigo, tinnitus, autoimmune inner ear disease, Meniere's syndrome, cochlear otosclerosis, sudden deafness, acoustic neuroma and other tumors of the ear and cerebellopontine angle. The student will learn techniques for history and physical examination, evaluation of diagnostic testing, histology and imaging studies. Surgical management of patients with neurotological disorders will be introduced in didactic courses.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** OTO 601S

**OTO 610S Audiology 3.0 Credits**

The student is introduced to anatomy and physiology of hearing and balance as well as tests used in diagnosis and treatment of disorders of hearing and balance. Techniques addressed include audiogram, tympanograms, otoacoustic emission, brainstem evoked response audiogram (ABR), Electronystagmogram (ENG), computerized dynamic posturography (CDP), rotary chair testing, electroneurography (ENoG), electrocorticogram (ECoG), vestibular-evoked myogenic potential (VEMP), tinnitus matching and masking, and central auditory processing testing.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 611S Endocrine Surgery 3.0 Credits**

This course introduces the student to concepts in the diagnosis and treatment of common disorders of the thyroid, parathyroid and pituitary glands. Techniques include serologic testing, imaging studies, nuclear medicine studies, FNA cytology and biopsy. Didactic lectures address autoimmune, malignant and non-malignant disorders, as well as chronic and emergent management of endocrine pathologies.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 612S Allergy and Immunology 3.0 Credits**

This course introduces the student to the diagnosis and treatment of allergic and immunologic disorders of the ear, nose, throat, head and neck. Basic science and principles of the various components of the immune system are presented. Techniques addressed include skin testing, RAST testing and serologic testing.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 613S Radiology of the Head and Neck 3.0 Credits**

This course introduces students to the physics of and indications for imaging of the head and neck. Emphasis is placed on computed tomography, magnetic resonance imaging, magnetic resonance angiography, arteriography and ultrasound. The course also includes nuclear imaging SPECT and PET.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 614S Pathology and Histology 3.0 Credits**

The student is introduced to pathologic and histologic diagnoses of surgical pathology of the head and neck. This hands-on course includes didactic lectures and evaluation of pathology specimens and microscopic slide analysis.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 615S Pediatric Otolaryngology, Advanced 3.0 Credits**

This course is tailored to introduce students to the diagnosis and treatment of complexly and/or critically ill children. Didactic lectures include pediatric cancer, rare childhood disease, pediatric HIV and AIDS, congenital abnormalities and prematurity, with emphasis on acute, chronic and emergent care.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** OTO 603S

**OTO 616S Otolaryngology Practice 3.0 Credits**

This course focuses on practice management issues for the otolaryngologist including procedural terminology and coding, patient registration, surgical scheduling, precertification, documentation of services, legal issues including contract law and privacy issues. Economic issues and practice building will also be covered in didactic lectures. A special emphasis is placed on academic practice.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 617S Research Methodology and Publication 3.0 Credits**

This introductory course focuses on the fundamentals of basic clinical research and research involving human subjects. Institutional, state and federal laws and regulations are covered. A special focus is placed on clinical relevance, research design and publication of research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit



**OTO 618S Facial Plastic and Reconstructive Surgery 3.0 Credits**

The student is introduced to the basic concepts of facial plastic and reconstructive surgery. Didactic training in rhinoplasty, open reduction internal fixation of frontal sinus fractures, mandibular, malar, orbital and maxillary fractures, blepharoplasty, rhytidectomy, orbital decompression, local flap closure, MOHS reconstructive surgery, techniques and facial reanimation procedures and other topics are included.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 619S Sleep Disorders 3.0 Credits**

This course introduces the student to the pathophysiology, evaluation and treatment of snoring, upper airway resistance syndrome and obstructive sleep apnea. Testing techniques, treatment options and outcomes assessment are included.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 620S Taste and Smell 3.0 Credits**

Didactic instruction introduces the student to the pathophysiology, evaluation and treatment of patients with disorders of taste and smell. Emphasis is placed on issues including nutrition and quality of life, and especially on current diagnostic technology and research potentials.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 621S Rhinosinusology 3.0 Credits**

This course introduces the student to anatomy and physiology of the nose, and a variety of techniques for evaluation of the nose and sinuses. Direct examination, nasal endoscopy, open sinus surgery and functional endoscopic sinus surgery are stressed. Variations and infectious diseases involving those in paranasal sinuses are included.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 622S Bronchoesophagology 3.0 Credits**

This course introduces the student to anatomy and diagnostic techniques for disorders of the larynx, trachea, bronchial tree and esophagus. Pathophysiology of a wide variety of disorders is included. This course is intended to provide the foundation for surgical training in flexible and rigid endoscopy.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 700S General Otolaryngologic Surgery 6.0 Credits**

General otolaryngology trains the student in surgical procedures common in general otolaryngologic practice. These include, among others, septoplasty, tonsillectomy, adenoidectomy, uvulopalatopharyngoplasty and other surgery for sleep disorders, submandibular gland resection, and resection of skin lesions of the head and neck. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 701S Otologic Surgery 6.0 Credits**

Supervised training in microsurgical techniques including middle ear and mastoid surgery is provided. Procedures will include myringotomy, tympanoplasty, ossiculoplasty, stapedectomy, tympanomastoidectomy and others. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 702S Head and Neck Oncologic Surgery 6.0 Credits**

This course requires mastery of surgery for cancer of the head and neck including glossectomy, mandibulectomy, laryngectomy, modified radical neck dissection, radical neck dissection, flap reconstruction and related procedures. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 703S Pediatric Otolaryngologic Surgery 6.0 Credits**

Pediatric otolaryngology trains the student in management of common and specialized otolaryngologic problems involving children. Common problems include pediatric approach to tonsillectomy and adenoidectomy, septoplasty, and direct laryngoscopy. This course of training also includes more complex issues including congenital malformations of the face, head and neck, benign and malignant neoplasms of the head and neck, pediatric airway disorders and bronchotracheal reconstruction. Pediatric cochlearimplantation also may be included. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 704S Neurotologic Surgery 6.0 Credits**

This course involves advanced otologic surgery including cochlear implantation, translabrynthine and middle cranial fossa approaches to the internal auditory canal for resection of ear-brain interface tumors, skull base surgery, facial nerve reanastomosis and related procedures. This also includes acquisition of knowledge about lumbar drainage, management of cerebral spinal fluid leaks and other issues common to neurotological surgery. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 705S Laryngologic Surgery 6.0 Credits**

Laryngology includes knowledge of the special microsurgical techniques required for delicate surgical management of benign and malignant disorders of the larynx. It includes microdirect laryngoscopy, techniques for vocal fold injection, injection medialization, use of cold instruments, appropriate laser use and safety, and other surgical techniques. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 706S Rhinologic Surgery 6.0 Credits**

The hands-on training in rhinological surgery includes complex septoplasty, repair of nasal fracture, extensive nasal turbinate surgery, rhinotomy, transnasal approaches to the sphenoid sinus and other complex rhinologic procedures. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 707S Surgery of the Sinuses 6.0 Credits**

Sinusology trains the otolaryngologic surgeon in external and functional endoscopic surgical approaches to the paranasal sinuses. It includes training in maxillary antrostomy, Caldwell-Luc, endoscopic surgery of the maxillary and ethmoid sinuses, external ethmoidectomy, intranasal and external frontal sinus procedures, and sphenoid sinus procedures. Special emphasis is placed on recognition and protection of the cribriform plate and four of the anterior cranial fossa. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 708S Bronchoesophagology 6.0 Credits**

Bronchoesophagology provides training in flexible and rigid direct laryngoscopy, bronchoscopy and esophagoscopy. This also includes transnasal esophagoscopy and flexible and rigid endoscopic laser surgical techniques. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO 709S Cosmetic Plastic and Reconstructive Surgery 6.0 Credits**

The cosmetic and reconstructive surgery experience includes training in theory and practice of procedures such as rhinoplasty, blepharoplasty, rhytidectomy, chin implantation, skin resurfacing, regional free flaps, and may include training and free flap techniques. The student will learn the names of all instruments, surgical reasoning and strategy, and will develop competence in surgical techniques, demonstrated by the ability to perform the procedures under supervision.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**OTO T680S Special Topics in Otolaryngology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**OTO T780S Special Topics in Otolaryngology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Otolaryngology

### Courses

**OTOL 8212S Otolaryngology \*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OTOL 8213S Otolaryngology - 3wks 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OTOL 8214S Otolaryngology 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OTOL 8332S Pediatric Otolaryngology\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OTOL 8334S Pediatric Otolaryngology 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**OTOL 858S OTOLARYNGOLOGY - 2 WEEKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**OTOL 859S OTOLARYNGOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**OTOL 895S OTOLARYNGOLOGY ELECTIVE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**OTOL 9092S OTOLARYNGOLOGY-2WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**OTOL 9094S OTOLARYNGOLOGY ELECTIVE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**OTOL 9752S RESEARCH-OTOLARYNGOLOGY-2WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**OTOL 9754S RESEARCH- OTOLARYNGOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits

## Pathologists Assistant

### Courses

**MSPA 500S Gross Anatomy 5.0 Credits**

Dissection of the human body with particular attention to the morphological relationships of individual organ systems. Emphasis is placed on internal anatomy as a major facet of this instruction which is designed for eventual autopsy evisceration and subsequent dissection, as well as surgical pathology gross examinations.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 10 credits**MSPA 510S Laboratory Management 2.0 Credits**

The organization and function of an Anatomic Pathology laboratory is investigated to include ordering supplies, financial management, computerization, laboratory safety, billing, personnel managements, organizational compliance (JCAHO, CAP, OSHA) and quality assurance.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 4 credits**MSPA 520S Medical Terminology 3.0 Credits**

Study of the etymology of medical and surgical terms with emphasis on the principles or word analysis, construction, and evolution.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**MSPA 530S Biomedical Photography 4.0 Credits**

Basic introductory photography course with special emphasis on macro, close-up and photomicrographic techniques. Special techniques relative to the biomedical field, such as digital imaging and basic radiographic techniques are explored.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 8 credits**MSPA 540S Histotechnology I 3.0 Credits**

Basic histology and histochemistry techniques are covered through formal lecture and laboratory experience.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 6 credits**MSPA 541S Histotechnology II 3.0 Credits**

Advanced histology and histochemistry techniques are covered through formal lecture and laboratory experience. This course is a continuation of MSPA 540S.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 6 credits**Prerequisites:** MSPA 540S [Min Grade: C]**MSPA 550S Applied Anatomic Pathology 4.0 Credits**

The course is designed to bring the students through the clinical aspects of chart review as well as academic autopsy and surgical pathology practices.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 8 credits**MSPA 560S Medical Ethics 2.0 Credits**

"MedEthEx OnLine" is a series of exercises in medical ethics and communication skills. The goal of the program is to enable students to improve their knowledge of medical ethics and their skills in communicating about ethical issues with patients and their families.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 4 credits**MSPA 570S Medical Pathology I 6.0 Credits****College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 12 credits**MSPA 571S Medical Pathology II 4.0 Credits****College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 8 credits**MSPA 580S Medical Microbiology I 4.0 Credits****College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated 2 times for 8 credits

**MSPA 581S Medical Microbiology II 3.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 6 credits

**MSPA 590S Leadership Skills for the Medical Profession 3.0 Credits**

This course is designed to help students develop leadership skills in order to facilitate success in their professional and personal lives. Students will be given the opportunity to discover and practice several leadership strategies and techniques. Topics will include leadership skills, communication skills, time-management, team-building, conflict resolution and stress management.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**MSPA 600S Surgical Pathology I 6.0 Credits**

Clinical practicum designed to teach the students the methods of gross tissue description, dissection and preparation of surgical specimens for light, immunofluorescent, immunochemical, frozen and electron microscopy.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 12 credits

**MSPA 601S Surgical Pathology II 6.0 Credits**

Clinical practicum designed to teach the students the methods of gross tissue description, dissection and preparation of surgical specimens for light, immunofluorescent, immunochemical, frozen and electron microscopy. A continuation of Surgical Pathology I.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 12 credits

**Prerequisites:** MSPA 600S [Min Grade: C]

**MSPA 602S Surgical Pathology III 6.0 Credits**

Clinical practicum designed to teach the students the methods of gross tissue description, dissection and preparation of surgical specimens for light, immunofluorescent, immunochemical, frozen and electron microscopy. A continuation of Surgical Pathology II.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 12 credits

**Prerequisites:** MSPA 601S [Min Grade: C]

**MSPA 610S Autopsy Pathology I 6.0 Credits**

Clinical practicum designed to teach the students techniques of autopsy evisceration and dissection as well as special skills and procedures necessary for the performance of post-mortem examinations.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 12 credits

**MSPA 611S Autopsy Pathology II 6.0 Credits**

Clinical practicum designed to teach the students techniques of autopsy evisceration and dissection as well as special skills and procedures necessary for the performance of post-mortem examinations. A continuation of Autopsy Pathology I.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 12 credits

**Prerequisites:** MSPA 610S [Min Grade: C]

**MSPA 612S Autopsy Pathology III 6.0 Credits**

Clinical practicum designed to teach the students techniques of autopsy evisceration and dissection as well as special skills and procedures necessary for the performance of post-mortem examinations. A continuation of Autopsy Pathology II.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 12 credits

**Prerequisites:** MSPA 611S [Min Grade: C]

**MSPA T580S Special Topics in Pathologists' Assistant 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**MSPA T680S Special Topics in Pathologists' Assistant 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Pathology

### Courses

**PATH 502S PATHOLOGY 1ST LAB ROTATION 4.0 Credits**

First rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotation are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PATH 503S Pathology Journal Club 1.0 Credit**

Students enroll for a minimum of four semesters for this twice monthly meeting.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**PATH 505S PATHOLOGY 2ND LAB ROTATION 4.0 Credits**

Second rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PATH 506S PATHOLOGY 3RD LAB ROTATION 4.0 Credits**

Third rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during fall, spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PATH 507S MEDICAL PATHOLOGY PART 1 7.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PATH 509S Pathologic Processes 3.0 Credits**

An abridged pathology course focusing primarily on aspects of general pathology (inflammation, wound healing and repair, immunopathology and autoimmunity, coagulation, vascular biology, and principles of neoplasia). Histopathology and cytology will be introduced. This course is a subset of PATH-507-05 Medical Pathology I geared toward the needs of graduate students.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PATH 600S Pathology Thesis Research 9.0 Credits**

Research toward the fulfillment of the dissertation is conducted beginning after successful completion of the qualifying examination. Progress is monitored by the student's advisor and department, Advisory Committee or Thesis Committee.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**PATH 601S CELL MOL PATHBIO CANCER ANGIOG 4.0 Credits**

An advanced course addressing the cell and molecular processes associated with the biology of cancer progression. Major topics include cytogenetic abnormalities, the role and function of oncogenes and tumor suppressor genes, growth factor receptor interactions, cell cycle control and regulation of cell death, angiogenesis and the role of the extracellular matrix, viruses and cancer, tumor immunobiology, and tumor metastases. Although didactic in nature, the course requires extensive exposure to the current literature on topics at the forefront of cancer research.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PATH 751S PATHOLOGY AND LABORATORY MEDICINE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 819S ANATOMIC PATH & LAB MED- 3 WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 820S ANATOMIC PATH & LAB MED- 1 WK 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 8214S LABORATORY MEDICINE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 821S ANATOMIC PATHOLOGY- 2 WEEKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 8222S ANATOMIC PATHOLOGY - 2 WEEKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**PATH 8223S Anatomic Pathology 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**PATH 8224S ANATOMIC PATHOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**PATH 822S ANATOMIC PATHOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 8232S CLINICAL PATHOLOGY- 2 WEEKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**PATH 8234S Clinical Pathology 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 823S CLINICAL PATHOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 8242S Diagnostic Cytology\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**PATH 8244S DIAGNOSTIC CYTOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 824S CLINICAL PATHOLOGY-2 WEEKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 825S DIAGNOSTIC CYTOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PATH 826S ANATOMIC PATH & LAB MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 828S DIAGNOSTIC CYTOLOGY - 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 829S PATHOLOGY SUBSPECIALTY - 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 8311S ANATOMIC PATH & LAB MED - 1 WK 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 8312S ANATOMIC PATH & LAB MED - 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 8313S ANATOMIC PATH & LAB MED- 3WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 8314S Anatomic Path & Lab Medicine 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 8412S PATHOLOGY SUBSPECIALTY- 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 8414S PATHOLOGY SUBSPECIALTY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 8424S Oncologic Pathology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 9092S Forensic Pathology\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 9094S ELECTIVE - PATHOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 955S LABORATORY MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 956S PATHOLOGY RESEARCH 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 9752S RESEARCH - PATHOLOGY - 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 9754S RESEARCH - PATHOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH 9756S RESEARCH-PATHOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PATH T580S Special Topics in Pathology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

College/Department: COM School of Biomedical Sciences Professional Studies

Repeat Status: Can be repeated multiple times for credit

**PATH T680S Special Topics in Pathology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

College/Department: COM School of Biomedical Sciences Professional Studies

Repeat Status: Can be repeated multiple times for credit

## Pediatrics

### Courses

**PEDS 8010S Pediatrics 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8015S Pediatrics Clerkship 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 801S PEDIATRICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8112S PEDS.-GASTROENTEROLOGY -2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**PEDS 8114S Adolescent Medicine 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8212S Pediatric Allergy\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8213S PEDIATRIC ALLERGY/IMMUN.- 3WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8214S PEDIATRIC ALLERGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8224S Pediatric Pulmonary/Allergy 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 822S PEDIATRIC PRIMARY CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 823S GENERAL PEDIATRICS (PED. MED.) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 824S NEONATAL INTENSIVE CARE-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 825S NEONATAL INTENSIVE CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 827S PEDIATRIC ELECTIVES 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 828S PEDIATRIC ENDOCRINOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 829S NEURODEVELOPMENTAL PEDIATRICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 830S SUBINTERNSHIP IN PEDIATRICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8312S AMBULATORY PEDIATRICS- 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8314S Ambulatory Pediatrics 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 831S CLINICAL GENETICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8322S Outpatient Peds & Advocacy 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8324S Outpatient Peds & Advocacy 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 832S DEVELOPMENTAL PEDIATRICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8332S Peds Palliative Care\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8334S Pediatric Palliative Care 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 833S PEDIATRIC INFECTIOUS DISEASE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 834S PEDIATRIC NEPHROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 835S PEDIATRIC ALLERGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 836S PED.GENETICS/DYSMORPHOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 837S PEDIATRIC CARDIOLOGY - 2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 838S PEDIATRIC ENDOCRINOLOGY - 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8412S PEDIATRIC CARDIOLOGY - 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**PEDS 8414S PEDIATRIC CARDIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 841S CHILD NEUROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 845S PEDIATRIC PATHOLOGY-2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8504S Pediatric Subl in Hospital Med 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8514S DEVELOPMENTAL PEDIATRICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8516S DEVELOPMENTAL-PEDIATRICS-6WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**PEDS 8524S Pediatric Crit Care Med Sub 1 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 8552S Subinternship Ped. Surgery\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 8554S Subinternship in Ped. Surgery 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 8612S Pediatric Emergency Med\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 8614S Pediatric Emergency Medicine 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 8712S PEDIATRIC ENDOCRINOLOGY - 2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 8714S Pediatric Endocrinology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 8812S Pediatric Gastroenterology-2wk 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 8813S PEDIATRIC GASTROENTEROLOGY 3WK 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**PEDS 8814S PEDIATRIC GASTROENTEROLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 8912S PEDIATRIC GERIATRICS - 2 WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 8914S Ped Genetics/Dysmorphology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 895S ELECTIVE - PEDIATRICS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 898S ELECTIVE/PEDIATRICS 3.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 899S AMBULATORY PEDIATRICS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9012S PEDS.-HEMATOLOGY/ONCOLOGY 2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**PEDS 9014S PEDIATRIC HEMATOLOGY/ ONCOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9022S Pediatric Hematology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9024S Pediatric Hematology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9033S Pediatric Rheumatology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9034S Pediatric Rheumatology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 903S NEONATAL MED SUBINTERNSHIP 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9042S CHILD MALTREATMENT & NEGLECT 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9044S Child Maltreatment & Neglect 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 904S NEONATAL RESEARCH 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 905S PEDIATRIC PULMONARY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9064S Child Abuse Pediatrics 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9092S ELECTIVE-PEDIATRICS, 2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**PEDS 9093S ELECTIVE-PEDIATRICS -3WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**PEDS 9094S ELECTIVE - PEDIATRICS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PEDS 9112S PEDS HIV&OTHER IMMUN DIS-2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits



**PEDS 9114S Pediatric Rheumatology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9212S Ped Infectious Disease\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9213S Pediatric Infectious Diseases 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9214S PEDIATRIC INFECTIOUS DISEASE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9312S NEONATAL INTENSIVE CARE - 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**PEDS 9314S Neonatal Intensive Care 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9323S Pediatric Intensive Care Unit 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9324S Pediatric Intensive Care 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**PEDS 934S PEDIATRIC GASTROENTEROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9414S PEDIATRIC NEPHROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9514S PEDIATRIC OPHTHALMOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9612S PEDIATRIC DENTISTRY- 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**PEDS 9613S PEDIARTIC DENISTRY - 3 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9614S PEDIATRIC DENTISTRY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 962S PEDIATRIC HEMATOLOGY/ONCOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 963S PEDIATRIC EMERGENCY MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 964S PEDIATRIC OPHTHALMOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9652S Pediatric Pathology\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9654S PEDIATRIC PATHOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 966S PEDIATRIC PATHOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 967S PEDIATRIC SURGERY 3.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 968S CHILD ADVOCACY/COMMUNITY HEALT 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 969S PEDIATRIC DENTISTRY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 970S PED HIV & OTHER IMMUN DISORDER 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9712S Pediatric Primary Care-2 weeks 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9714S PEDIATRIC PRIMARY CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 971S PEDS HIV&OTHER IMMUN DIS-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9723S PEDIATRICS ELECTIVE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9724S PEDIARTICS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**PEDS 972S PEDIATRIC DENTISTRY-2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PEDS 9754S RESEARCH PEDIATRIC 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**PEDS 9756S RESEARCH-PEDIATRICS 6WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**PEDS 9758S Research Pediatric 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**PEDS 9764S RESEARCH - NEONATAL 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS 980S ADOLESCENT MEDICINE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS 9814S PEDIATRIC PULMONARY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS 981S PEDIATRIC SURGERY ROTATION 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**PEDS 9852S Pediatric Surgery\*\*\* 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS 9854S PEDIATRIC SURGERY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS 9864S Pediatric Neurosurgery 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS 9912S NEONATAL MED-SUBINTERNSHIP 2WK 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**PEDS 9914S Neonatal Med Subinternship 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS S524S Transgender Medicine 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS S534S Transitions-Pediatric to Adult 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS S564S Neurodevelopmental Peds 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PEDS S582S Building Health Equity\*\*\* 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit

## Pharmacology

### Courses

**PHRM 502S Current Topics in Pharmacology & Physiology 1.0 Credit**

Current topics in experimental pharmacology are presented via a journal club alternating with research presentations. In addition to active student participation, all members of the department of pharmacology and physiology (research assistants, postdoctoral fellows and faculty) participate.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Can be repeated multiple times for credit**PHRM 503S Pharm & Phys 1st Lab Rotation 4.0 Credits**

First rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**PHRM 504S Pharm & Phys 2nd Lab Rotation 4.0 Credits**

Second rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**PHRM 505S Pharm & Phys 3rd Lab Rotation 4.0 Credits**

Third rotation. Guided research is conducted on a part-time basis for two or three 8-10 week periods. Rotations are generally conducted during spring or summer of the first year. A written research report is required at the end of each rotation.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit**PHRM 507S Prin of Neuropharmacology 3.0 Credits**

This course covers basic concepts in Neuropharmacology, all of the major neurotransmitter systems, behavioral pharmacology and addition, approaches to molecular and cellular physiology including photoactivated biomolecules, electrophysiology, phosphorylation.

**College/Department:** COM School of Biomedical Sciences Professional Studies**Repeat Status:** Not repeatable for credit

**PHRM 508S Fundamentals in Neuropharmacology 1.5 Credit**

This is an interactive and interdisciplinary course that introduces students to fundamental aspects of neuropharmacology. It is devoted to the study of drugs that affect nervous tissue and alter behaviors. The course will give an introduction to pharmacokinetics, receptor binding theory, signal transduction, neurochemical methods, and behavioral pharmacology. This is followed by lectures on individual neurotransmitter systems. The course will be taught at Drexel University College of Medicine.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** IDPT 521 [Min Grade: B] or IDPT 550 [Min Grade: B]

**PHRM 512S Graduate Pharmacology 3.0 Credits**

This team taught course provides a basic knowledge of the pharmacologic mechanisms of action, effects on organ systems, routes of administration, pharmacokinetics, therapeutic uses, adverse reactions, contraindications, and drug interactions of drugs.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PHRM 516S Advanced Topics in Physiology 1.0 Credit**

PHRM516S is presented in several formats throughout the semester to discuss cellular physiology, neurophysiology, muscle physiology, cardiovascular physiology, pulmonary physiology, gastrointestinal physiology, endocrinology, and renal physiology. These formats include review of past scientific findings that led to the current understanding of a physiological principle, journal club style format, self-directed problem sheets, development of a working model based on past and present scientific knowledge, and point/counter-point discussions where students debate pros and cons of a controversy in physiology.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Corequisite:** PHGY 503S

**PHRM 517S Advanced Topics in Pharmacology 1.0 Credit**

This course will expand upon the Graduate Pharmacology course for graduate students enrolled in Graduate Pharmacology 512S. The intent is to provide more in-depth coverage of selected topics that will be beneficial to students pursuing a career where pharmacology is a principle component of training, education and/or employment.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Corequisite:** PHRM 512S

**PHRM 518S New Frontiers in Therapy 1.0 Credit**

This course will provide a glimpse of what could revolutionize diagnosis and treatment with emphasis on personalized medicine. Scientific impact, technical challenges, and sociopolitical repercussions will be discussed. Students will be required to write a research proposal in NIH format and are expected to participate in peer review.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PHRM 519S Methods in Biomedical Research 2.0 Credits**

A primary goal for the course is to introduce students in the Graduate School of Biomedical Sciences and Professional Studies graduate programs to the breadth of techniques used within biomedical research, and thus at their disposal as they progress through their training. In parallel, it is expected that students will gain insight into not only the technical aspects of a variety of methodologies, but also how to critically examine techniques in both their own research and the literature for strengths, weaknesses, caveats and limits. At the end of the course, students should have a greater appreciation for the modalities used outside of their own rotation or dissertation labs, and an understanding of how those technologies are moving bench science forward.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PHRM 520S Internship in Drug Discovery and Development 4.0 Credits**

The Internship in Drug Discovery and Development provides the student with a unique opportunity to apply the principles and skills learned in the classroom and acquire valuable professional experience and critical insight in a specific field. The internship is integrated into the curriculum such that it complements classroom activities and permits the student to explore an area of interest that they may ultimately pursue as a career path. Students are paired with experienced professionals who supervise their work and act as mentors and advisors. Internships can be arranged with an extensive network of pharmaceutical corporations, biotechnology companies, foundations and universities in the region as well as Drexel University itself.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** PHRM 512S [Min Grade: C] and PHGY 503S [Min Grade: C] and PHRM 525S [Min Grade: C]

**PHRM 521S Intensive Internship in Drug Discovery and Development 9.0 Credits**

The Intensive Internship in Drug Discovery and Development provides the student with a unique opportunity to apply the principles and skills learned in the classroom and acquire valuable professional experience and critical insight in a specific field. The internship is integrated into the curriculum such that it complements classroom activities and permits the student to explore an area of interest that they may ultimately pursue as a career path. Students are paired with experienced professionals who supervise their work and act as mentors and advisors. Internships can be arranged with an extensive network of pharmaceutical corporations, biotechnology companies, foundations and universities in the region as well as Drexel University itself.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** PHRM 512S [Min Grade: C] and PHGY 503S [Min Grade: C] and PHRM 525S [Min Grade: C]

**PHRM 525S Drug Discovery and Development I 3.0 Credits**

This course, the first of two, will provide in-depth exposure to the concepts and processes involved in drug discovery and development as practiced in the biopharmaceutical industry cover all facets from target identification through to the submission of the investigational New Drug Application (IND). Current unmet medical needs and case histories from difference therapeutic areas will be reviewed.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PHRM 526S Drug Discovery and Development II 3.0 Credits**

This course will provide in-depth exposure to the concepts and processes involved in drug discovery and development as practiced in the biopharmaceutical industry. It will follow the first course (Drug Discovery and Development I) and will cover all aspects from roval process to the submission of the NDA to regulatory approval and post-marketing surveillance.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**Prerequisites:** PHRM 525S [Min Grade: B]

**PHRM 527S Current Topics in Drug Discovery and Development 1.0 Credit**

This is a student-driven course in a journal club format. Students select journal articles or news reports that highlight recent discoveries or developments that are particularly important or relevant to the field of drug discovery and development. Topics for presentation and discussion will include scientific, technical, commercial, legal, regulatory, and ethical issues as well as in-depth case studies of recently developed blockbuster or breakthrough drugs. Students will prepare and give presentations on their chosen topic, provide discussion prompts, answer questions related to their presentations, review the presentations of other students and pose relevant questions.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**PHRM 600S Pharmacology Thesis Research 9.0 Credits**

Research toward the fulfillment of the dissertation is conducted beginning after successful completion of the qualifying examination. Progress is monitored by the student's advisor and department, Advisory Committee or Thesis Committee.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**PHRM 602S Research Methods in Pharmacology 2.0 Credits**

A research course in which the student participates in several research projects under the direction of different staff members in order to become familiar with the specific areas of expertise of the faculty. This course emphasizes not only experimental methods but also the conceptual bases for investigating current problems in pharmacology.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PHRM 605S Research in Drug Discovery and Development 4.0 Credits**

This course is designed to provide opportunities for the student to pursue research in the area of drug discovery and development. This can be done either in an academic or pharmaceutical laboratory under the supervision of a mentor. An alternative or an additional aspect can be the conduct of research for this thesis that is not laboratory research but library research based on an approved topic for the thesis requirement. Both alternatives, laboratory or library research must be approved by the course directors.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 3 times for 16 credits

**PHRM 610S Practicum in Drug Discovery and Development 4.0 Credits**

This course prepares students for transition into or advancement in the field of drug discovery and development and can be used as the basis for the scholarly document that is required for completion of the program. It consists of an independent project that involves in-depth exposure to a specific topic that is relevant to a discipline in drug discovery and development that the student wishes to pursue in the future. The training consists of hands-on research or development of technical expertise under the guidance of a mentor who has experience in the field.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 2 times for 12 credits

**PHRM 751S MEDICAL PHARMACOLGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PHRM 823S CARDIOVASCULAR PHARMACOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PHRM 9092S PHARMACOLOGY - ELECTIVE - 2WKS 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PHRM 9094S PHARMACOLOGY -ELECTIVE 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 0 times for 0 credits

**PHRM 9750S RESEARCH-PHARMACOLOGY-16 wks 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PHRM 9754S PHARMACOLOGY RESEARCH 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PHRM 999S Special Topics in Pharmacology & Physiology 1.0-4.0 Credit**

This is a special topics course that will focus on graduate level topics in the area of Pharmacology & Physiology. The exact content, readings, and grading will be determined by the professor on a course by course basis.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated 3 times for 16 credits

**PHRM T580S Special Topics in Pharmacology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

**PHRM T680S Special Topics in Pharmacology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Physical Med & Rehabilitation

### Courses

**PMRM 8712S Physical Medicine & Rehab\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PMRM 8714S Physical Medicine and Rehabilitation 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 3 times for 0 credits

**PMRM 9092S Spinal Cord Injury Rehab\*\*\* 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PMRM 9094S ELECTIVE-PHYSICAL MED & REHAB. 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

## Physiology

### Courses

**PHGY 502S ION CHANNELS IN CELLULAR PHYS. 2.0 Credits**

This elective advanced course covers all aspects of ion channel physiology. In depth lectures on voltage-gated and ligand-gated ion channel structure and function are presented in the first part of the course. The second part of the course delves into electrophysiology and its application to cell physiology.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PHGY 503S Graduate Physiology 4.0 Credits**

This lecture course is designed to introduce graduate students to the major organ systems of the body and their integration. A major focus will be on the basic biological/biophysical processes that underlie the integration functioning of these systems. The focus is on general principles, and examples will be drawn from both human and animal physiology.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

**PHGY 701S MEDICAL PHYSIOLOGY 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Can be repeated 9 times for NaN credits

**PHGY T580S Special Topics in Physiology 0.0-12.0 Credits**

Topics decided upon by faculty will vary within the area of study.

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Can be repeated multiple times for credit

## Pre - Medical

### Courses

**PMED 800S Registered for Degree Only 0.0-6.0 Credits**

**College/Department:** COM School of Biomedical Sciences Professional Studies

**Repeat Status:** Not repeatable for credit

## Program in Integrated Learning

### Courses

**PILM 710S PIL BLOCK I 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PILM 711S GROSS ANATOMY AND EMBRYOLOGY 0.0 Credits**

This course is part of PIL BLOCK I (PILM 710S).

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PILM 712S MICROANATOMY AND CELL BIOLOGY 0.0 Credits**

This course is part of PIL BLOCK I (PILM 710S).

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PILM 713S PATIENT AS A PERSON 0.0 Credits**

This course is part of PIL BLOCK I (PILM 710S).

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PILM 714S BEHAVIORAL SCIENCE AND PSYCHOPATHOLOGY 0.0 Credits**

This course is part of PIL BLOCK I (PILM 710S).

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PILM 715S CLINICAL SKILLS 0.0 Credits**

This course is part of PIL BLOCK I (PILM 710S).

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PILM 720S PIL BLOCK II 0.0 Credits**

**College/Department:** College of Medicine

**Repeat Status:** Not repeatable for credit

**PILM 721S MEDICAL NEUROSCIENCE 0.0 Credits**

This course is part of PIL BLOCK II (PILM 720S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 722S MEDICAL PHYSIOLOGY 0.0 Credits**

This course is part of PIL BLOCK II (PILM 720S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 723S PATIENT AS A PERSON 0.0 Credits**

This course is part of PIL BLOCK II (PILM 720S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 724S BEHAVIORAL SCIENCE AND PSYCHOPATHOLOGY 0.0 Credits**

This course is part of PIL BLOCK II (PILM 720S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 725S CLINICAL SKILLS 0.0 Credits**

This course is part of PIL BLOCK II (PILM 720S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 730S PIL BLOCK III 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 731S Immunology & Fund Microbiology 0.0 Credits**

This course is part of PIL BLOCK III (PILM 730S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 732S Medical Biochemistry & Nutrition 0.0 Credits**

This course is part of PIL BLOCK III (PILM 730S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 733S PATIENT AS A PERSON 0.0 Credits**

This course is part of PIL BLOCK III (PILM 730S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 734S Biopsychosocial Determinant in Health and Illness 0.0 Credits**

This course is part of PIL BLOCK III (PILM 730S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 735S CLINICAL SKILLS 0.0 Credits**

This course is part of PIL BLOCK III (PILM 730S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 736S Medical Genetics 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 738S PBL Process - Yr1 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 740S PIL BLOCK IV 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 741S Primary Care Practicum 0.0 Credits**

This course is part of PIL BLOCK IV (PILM 740S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 742S Community Health Component 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 750S PIL BLOCK V 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 751S BEHAVIORAL SCIENCE AND PSYCHOPATHOLOGY 0.0 Credits**

This course is part of PIL BLOCK V (PILM 750S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 752S PATHOLOGY AND LABORATORY MEDICINE 0.0 Credits**

This course is part of PIL BLOCK V (PILM 750S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 753S PATHOPHYSIOLOGY 0.0 Credits**

This course is part of PIL BLOCK V (PILM 750S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 754S MEDICAL PHARMACOLOGY 0.0 Credits**

This course is part of PIL BLOCK V (PILM 750S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 755S CLINICAL SKILLS 0.0 Credits**

This course is part of PIL BLOCK V (PILM 750S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 756S PATIENT AS A PERSON 0.0 Credits**

This course is part of PIL BLOCK V (PILM 750S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 758S MEDICAL MICROBIOLOGY 0.0 Credits**

This course is part of PIL BLOCK V (PILM 750S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 760S PIL BLOCK VI 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 761S BEHAVIORAL SCIENCE AND PSYCHOPATHOLOGY 0.0 Credits**

This course is part of PIL BLOCK VI (PILM 760S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 762S PATHOLOGY AND LABORATORY MEDICINE 0.0 Credits**

This course is part of PIL BLOCK VI (PILM 760S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 763S PATHOPHYSIOLOGY 0.0 Credits**

This course is part of PIL BLOCK VI (PILM 760S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 764S MEDICAL PHARMACOLOGY 0.0 Credits**

This course is part of PIL BLOCK VI (PILM 760S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 765S CLINICAL SKILLS 0.0 Credits**

This course is part of PIL BLOCK VI (PILM 760S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 766S PATIENT AS A PERSON 0.0 Credits**

This course is part of PIL BLOCK VI (PILM 760S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 768S MEDICAL MICROBIOLOGY 0.0 Credits**

This course is part of PIL BLOCK VI (PILM 760S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 770S PIL BLOCK VII 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 771S Intro to Clinical Psychiatry 0.0 Credits**

This course is part of PIL BLOCK VII (PILM 770S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 772S PATHOLOGY AND LABORATORY MEDICINE 0.0 Credits**

This course is part of PIL BLOCK VII (PILM 770S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 773S PATHOPHYSIOLOGY 0.0 Credits**

This course is part of PIL BLOCK VII (PILM 770S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 774S MEDICAL PHARMACOLOGY 0.0 Credits**

This course is part of PIL BLOCK VII (PILM 770S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 775S CLINICAL SKILLS 0.0 Credits**

This course is part of PIL BLOCK VII (PILM 770S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 776S PATIENT AS A PERSON 0.0 Credits**

This course is part of PIL BLOCK VII (PILM 770S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 778S MEDICAL MICROBIOLOGY 0.0 Credits**

This course is part of PIL BLOCK VII (PILM 770S).  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PILM 780S PBL Process - Yr2 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

## Psychiatry

### Courses

**PSYC 701S Biopsychosocial Determinant in Health and Illness 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 9 times for NaN credits

**PSYC 751S Intro to Clinical Psychiatry 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PSYC 8010S PSYCHIATRY 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PSYC 8015S Psychiatry Clerkship 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PSYC 801S PSYCHIATRY 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PSYC 8112S SR.ELECT.CHILD&ADOLESCENT PSYC 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**PSYC 8114S CHILD & ADOLESCENT PSYCHIATRY 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PSYC 8115S Child/Adolescent & Adult Psyc 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PSYC 8212S CONSULT-LIAISON PSYCH-2WKS 0.0 Credits**

**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**PSYC 8214S Consult-Liaison Psychiatry 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 824S CHILD & ADOLESCENT PSYCHIATRY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 827S CONSULT-LIAISON PSYCHIATRY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 829S GERIATRIC PSYCH. & NEUROPSYCH. 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8314S PSYCHIATRY - ADULT INPATIENT 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 831S EMERGENCY PSYCHIATRY-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8324S PSYCHIATRY- INPATIENT SERVICES 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 832S INPATIENT & C/L PSYCHIATRY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8334S Caring Together 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 833S NEUROPSYCHOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 834S CLINICAL RESEARCH IN NEUROPSYCH 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 836S ADDICTION MEDICINE - 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 837S EMERGENCY PSYCHIATRY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 838S NEUROPSYCHIATRY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 840S PSYCHIATRY- ADULT INPATIENT 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8414S PSYCHIATRIC MEDICAL CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8416S PSYCHIATRIC MEDICAL CARE -8WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 841S PSYCHIATRY- INPATIENT SERVICES 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8434S Emergency Psychiatry 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8514S Adult Inpt Psychiatry Subinter 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8524S Emergency Psychiatry Subintern 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8534S Consult Liaison PsychSubintern 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8614S Substance Abuse and Dependence 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8624S Addiction Medicine 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**PSYC 8724S Perinatal Psychiatry 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8734S Outpt & Hosp Consult Psychiatr 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8814S Eating Disorders 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 884S ADDICTION PSYCHIATRY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 8874S Dual Diagnosis Psychiatry 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**PSYC 9092S ELECTIVE/PSYCHIATRY 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit



**PSYC 9094S Elective - Psychiatry 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC 9312S Adult Inpatient 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC 9314S PSYCHIATRY- ADULT INPATIENT 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC 962S PSYCHIATRIC MEDICAL CARE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC 970S CORRECTIONAL SERVICE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC 971S PSYCHIATRY RESEARCH 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC 9754S RESEARCH- PSYCHIATRY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC S584S Acting Internship in Adult Psy 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC S624S Child, Adolescent, Family 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC S634S Psych/FM Combined Elective 0.0 Credits**

This four-week elective focuses on psychiatric and general medical problems in a variety of patients and settings. The rotation incorporates many aspects of the UPMC Psychiatry-Family Medicine combined residency program and is shaped to give students a sense of what life will be like as a combined resident/attending. It introduces students to many of the faculty, residents, and clinical sites involved in the combined Psychiatry/Family Medicine residency at UPMC. Sites include the family health centers associated with UPMC McKeesport and St. Margaret Family Medicine Residency Programs, outpatient psychiatry mood/psychosis clinics, and the family medicine inpatient service at UPMC Western Psychiatric Hospital. The student will conduct family medicine and psychiatry clinical evaluations, including obtaining a history and performing physical exams, and make treatment recommendations. They will also participate in integrated care including in-person and chart consultations. The student will participate in family medicine and psychiatry resident didactics and present their own journal club topic at the end of the rotation.

**College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC S644S Psych Acting Internship 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**PSYC S654S Psychiatry in Medicine&Surgery 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit

## Public Health

### Courses

## Radiation Oncology

### Courses

**RAON 8112S Radiation Oncology\*\*\* 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**RAON 8113S RADIATION ONCOLOGY - 3 WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**RAON 8114S RADIATION ONCOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**RAON 823S RADIATION ONCOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**RAON 824S RADIATION ONCOLOGY - 2 WEEKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**RAON 8724S Multidisciplinary Oncology 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**RAON 895S RADIATION-ONCOLOGY ELECTIVE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**RAON 9092S RADIATION - ONCOLOGY ELE 2WKS 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for NaN credits**RAON 9093S RADIATION ONCOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**RAON 9094S RADIATION - ONCOLOGY ELECTIVE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**RAON 9752S Research-Radiation Oncology2wk 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**RAON 9754S RESEARCH-RADIATION ONCOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit

**RAON 9756S Research-Radiation Oncology6wk 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

## Radiation Sciences

### Courses

## Radiologic Sciences

### Courses

**RADI 8112S NEURORADIOLOGY- 2WS (S/U) 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**RADI 8113S NEURORADIOLOGY- 3WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8114S Neuroradiology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8152S Comprehensive Breast Care\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated multiple times for credit

**RADI 8154S Comprehensive Breast Care 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8212S NUCLEAR MEDICINE - 2 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8214S NUCLEAR MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 821S DIAGNOSTIC RADIOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 822S NUCLEAR MEDICINE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 825S RADIOLOGIC SCIENCE 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 826S NEURORADIOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 827S CLINICAL RADIOLOGY & NUCLEAR 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8312S Introduction to Radiology\*\*\* 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8412S DIAGNOSTIC RADIOLOGY - 2WKS. 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8413S Diagnostic Radiology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8414S DIAGNOSTIC RADIOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8512S VASCULAR & INTERVENT RAD- 2WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8514S VASCULAR & INTERVENTIONAL RAD 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8612S Interventional Radiology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8613S Interventional Radiology - 3wk 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8614S Interventional Radiology 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 8714S Radiologic Sciences 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 895S ELECTIVE - RADIOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 906S PEDIATRIC RADIOLOGY 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 907S PEDIATRIC RADIOLOGY-2 WEEKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Not repeatable for credit

**RADI 9092S ELECTIVE-RADIOLOGY -2WS (S/U) 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**RADI 9093S ELECTIVE-RADIOLOGY-3WKS 0.0 Credits**  
**College/Department:** College of Medicine  
**Repeat Status:** Can be repeated 0 times for 0 credits

**RADI 9094S ELECTIVE - RADIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**RADI 9312S PEDIATRIC RADIOLOGY - 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**RADI 9314S Pediatric Radiology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**RADI 958S VASCULAR & INTERVENT RAD-2 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**RADI 959S NUCLEAR MEDICINE - 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**RADI 960S NUCLEAR MEDICINE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**RADI 961S VASCULAR & INTERVENTIONAL RADI 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**RADI 9754S RESEARCH-NEURORADIOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**RADI 9756S RESEARCH-RADIOLOGY (6WKS) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**RADI 9757S RESEARCH-RADIOLOGY-7 WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**RADI 9758S RESEARCH-RADIOLOGY (8 WKS) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**RADI S564S Diagnostic Radiology&Pathology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

## Surgery

### Courses

**SURG 8010S SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 801S SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 802S GEN SURG WITH PRIMARY CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8114S AMBULATORY SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8168S ORAL & MAXILLOFACIAL SURG -8WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8212S Colorectal Surgery\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8214S COLON AND RECTAL SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 825S AMBULATORY SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 828S ELECTIVE IN OPHTHALMOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 829S ELECTIVE:ORAL & MAXILLO. SURG 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 830S ELECTIVE IN ORTHOPEDIC SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8314S COMMUNITY SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 832S ELECTIVE IN ENT,HEAD & NECK SU 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 833S PLASTIC & RECONSTRUCTIVE SURG 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 834S ELECTIVE IN TRAUMA/CRITICAL CA 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 836S SURGERY FOR NON-SURGEONS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 838S GENERAL SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 839S SUBINTERN IN GENERAL SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 840S GENERAL SURGERY-2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8414S GENERAL AND VASCULAR SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8423S VASCULAR SURGERY - 3 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8424S VASCULAR SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 842S SUBINT. IN CARDIOTHORACIC SURG 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 843S SUBINT. IN NEUROLOGICAL SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 845S ORTHOPEDIC SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 846S SUBINT. IN ENT, HEAD & NECK SUR 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 847S SUBINTERNSHIP IN PLASTIC SURGE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 848S TRAUMA/CRITICAL CARE 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 849S SUBINTERNSHIP IN UROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8503S SURGERY SUB INTERNSHIP 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8504S Subinternship in Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**SURG 8505S Subinternship in Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 850S ELECTIVE IN GENERAL SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8513S Gastrointestinal Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8514S GASTROINTESTINAL SURG/SURG ONC 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8522S General Surgery\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8523S General Surgery - 3 Weeks 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8524S GENERAL SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 852S GENERAL SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8532S Gen Surg/Min Invasive Surg\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8533S Minimally Invasive Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**SURG 8534S GEN SURG/MIN INVASIVE SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 853S CARDIOTHORACIC SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8544S TRANSPLANTATION/PEDIATRIC SURG 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8554S ADV MINIMALLY INVASIVE SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 855S OPHTHALMOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8564S ADVANCED HEPATOBILIARY SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 856S ORAL & MAXILLOFACIAL SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8574S GEN SURG W/ PRIM CARE EMPHASIS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8612S Oral & Maxillofacial Surgery\*\*\* 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8614S Oral & Maxillofacial Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8618S ORAL & MAXILLOFACIAL SURG 8WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 861S TRAUMA CRITICAL CARE, AGH 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8624S General/Vascular Surg/Wound 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 862S UROLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8632S DENTISTRY & ORAL MED 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 863S ORTHOPEDIC SUBINTERNSHIP 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 864S ELECTIVE IN PEDIATRIC SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 865S VASCULAR SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 866S SURGERY RESEARCH 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8712S SURGICAL ONCOLOGY -2WKS(S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8714S SURGICAL ONCOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8724S Min Invasive/Bariatric Surg 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8732S BREAST SURGERY - 2 WKS (S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8734S BREAST SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8812S PED PLAST&RECONSTRUC SURG(S/U) 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8814S Ped Plastic & Reconstruct Surg 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 881S ORAL & MAXILLOFACIAL SURG-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8822S PLASTIC & RECON. SURGERY- 2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**SURG 8823S Plastic & Reconstructive Surg 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8824S PLASTIC & RECONSTRUCTIVE SURG 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated multiple times for credit

**SURG 8825S Plastic/Reconstrutive Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8833S Pediatric Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8834S Pediatric Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 888S 3RD YEAR C. T. SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8914S SUBSPECIALITY SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 8934S WOMEN IN SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 895S ELECTIVE-SURGERY 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 898S BURN SURGERY 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9012S SURGICAL INTENSIVE CARE UNIT 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9013S Trauma/Critical Care 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated 0 times for NaN credits

**SURG 9014S Trauma/Critical Care 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated 0 times for 0 credits

**SURG 9022S Transplant Surgery\*\*\* 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated multiple times for credit

**SURG 9024S Transplant Surgery 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated multiple times for credit

**SURG 902S CARDIAC SURGERY - A 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9052S SURGICAL INTENSIVE CARE- 2WKS 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated 0 times for 0 credits

**SURG 9054S SURGICAL INTENSIVE CARE 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9092S ELECTIVE-SURGERY -2WKS (S/U) 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated 0 times for 0 credits

**SURG 9093S ELECTIVE-SURGERY 3WKS 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated 0 times for 0 credits

**SURG 9094S ELECTIVE-SURGERY 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9112S UROLOGY- 2WEEKS 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9113S Urology 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9114S UROLOGY 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9134S Pediatric Urology 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated multiple times for credit

**SURG 958S TRAUMA 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 961S VASCULAR SURGERY RESEARCH 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 971S KIDNEY/PANCREAS TRANSPLANTATIO 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 973S COLON AND RECTAL SURGERY 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 974S MUSCULOSKELETAL 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9752S Research - Surgery 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9754S RESEARCH - SURGERY 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 9756S RESEARCH-SURGERY 6WKS 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated 0 times for 0 credits

**SURG 9758S RESEARCH-FETAL WND HEALING 8WK 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Can be repeated 2 times for 0 credits

**SURG 975S COMMUNITY SURGERY 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 976S GENERAL AND VASCULAR SURGERY 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 977S GASTROINTESTINAL SURG/SURG ONC 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 978S GEN SURG/MIN INVASIVE SURGERY 0.0 Credits**

College/Department: College of Medicine  
Repeat Status: Not repeatable for credit

**SURG 979S TRANSPLANTATION/PEDIATRIC SURG 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 980S GEN SURG W/ PRIM CARE EMPHASIS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 981S SURGICAL ONCOLOGY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 982S PED PLASTIC & RECONSTRUCT SURG 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG 983S SUBSPECIALTY SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**SURG 984S ADV MINIMALLY INVASIVE SURGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**SURG 985S ADVANCED HEPATOBILIARY SUGERY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**SURG 988S PED PLAST&RECONSTRUC SURG-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG S513S Trauma & Emergency Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG S563S IntroTrauma Patient Management 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG S573S Emergency General Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG S574S Emergency Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG S624S Congenital Heart Surgery 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG S634S Hepatobiliary&Transplant Surg 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG S644S Laproscopic Surgery Service 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG S654S Burn&Soft Tissue Surgery AI 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**SURG S664S Colorectal Surgical Oncology 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

## Women's Health Ed. Program

### Courses

**WOMN 8112S WOMEN'S HEALTH AMBULATORY-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 8114S WOMEN'S HEALTH - AMBULATORY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 8122S WOMENS HLTH EDUCATION-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 8124S WOMEN'S HEALTH EDUCATION 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 8132S WOMN HLTH/COLL PRIM CARE 2-WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 8134S WOMEN'S HLTH IN THE COMMUNITY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 8144S Womens Health Primary Care Set 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 8152S WOMEN'S HEALTH-CLINICAL-2WKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**WOMN 8154S COMP BREAST CARE-MAMMOGRAPHY 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Can be repeated 0 times for 0 credits

**WOMN 8164S Women's Health & Public Policy 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 820S WOMEN'S HEALTH - 2 WEEKS 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 821S WOMEN'S HEALTH 0.0 Credits**

College/Department: College of Medicine

Repeat Status: Not repeatable for credit

**WOMN 822S WOMEN'S HEALTH CARDIOLOGY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**WOMN 823S WOMEN'S HEALTH EDUCATION 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**WOMN 824S WOMEN'S HLTH IN THE COMMUNITY 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Can be repeated 0 times for 0 credits**WOMN 895S WOMEN'S HEALTH ELECTIVE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit**WOMN 9094S WOMENS HEALTH-ELECTIVE 0.0 Credits****College/Department:** College of Medicine**Repeat Status:** Not repeatable for credit



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