

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL
Department of Pharmacology

Clinical Pharmacology and Therapeutics

Why a Course in Clinical Pharmacology and Therapeutics?

Students who are about to enter the practice of medicine would most likely agree with Hippocrates that *"the life is so short and the craft is so long to learn."* It is for this reason that the course in Clinical Pharmacology and Therapeutics was introduced into the medical school curriculum over 50 years ago. The complexity and difficulty of applying pharmacological interventions in the management of human disease is based on sound scientific principles that are understood and appreciated best by those who have had contact with patients. Offering a course of instruction in Clinical Pharmacology near the end of the medical school experience provides an opportunity to solidify one's ability toward approaching therapeutics with an increased degree of confidence.

Who Would Benefit from the Course?

Students who have completed subinternships in pediatrics, internal medicine and surgery will find Clinical Pharmacology and Therapeutics to be highly informative as it brings into focus many of the therapeutic approaches to the management of common clinical disorders. Emphasis is placed on the relationship between the basic and clinical sciences with an emphasis on pathophysiology and pharmacological mechanisms. Discussions by basic and clinical faculty along with student presentations cover a wide range of contemporary topics, some of which are listed below.

Class Schedule, Assignments and Grading.

Clinical Pharmacology and Therapeutics is offered in the Winter Term (Period 8) and is four weeks in duration. Classes meet from Monday to Friday from 9:00 a.m. until noon and from 1:00 p.m. until 3:00 p.m. The topics are organized so that basic science principles are discussed before the clinical presentations. Students are provided with reading material designed to expand upon the classroom discussion and to encourage self-learning.

Each student is asked to prepare and present a 30-minute discussion on an assigned topic. Students have viewed this as an interesting component of the course that serves as a valuable learning experience.

Students are graded (H, HP, P, etc.) based on attendance (mandatory), active participation, and on the quality of their 30-minute oral presentation.

For additional information, contact

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Review of Gastric Acid Secretion and Mechanism of Action of Therapeutic Agents
Mechanisms of Ulcer Pathogenesis and Patient Management

(Each student prepares an abstract and gives a 30-minute presentation)

Representative List of Topics Presented

- The Electrocardiogram/A Review
- Supraventricular Arrhythmias
- Electrophysiology/Pharmacology
- Atrial Fibrillation—Chronic & Acute Case Presentations
- Review of Coronary Artery Physiology and Drugs on the Coronary Circulation
- Biology of Acute Coronary
- Syndromes/Pharmacologic Interventions in the Patient with Stable-Unstable Angina Pectoris: Case Presentations
- Pharmacologic Interventions in the patient with Acute Myocardial Infarction
- Drugs and Failing Heart
- Management of the Patient with Heart Failure/New Concepts & Therapeutic Approaches
- Bedside Pharmacokinetics & Pharmacodynamics in the Patient with Renal Disease—A
- Guide for the Practicing Physician
- Hemotherapy—clinical evaluation, dosing, Administration, laboratory monitoring
- Adverse Reactions to Transfusion
- Recent Therapeutic Advances in Hematology
- Pharmacologic Management of Thrombosis
- Treatment Strategies for Management of Serum Lipids
- Peripheral Vascular Disease Pharmacologic Management
- Update on the Management of the Obese Patient: Is There a Role for Pharmacologic Intervention?
- Pharmacologic Management of Pain
- Treatment of Myasthenia Gravis
- Topics to be Determined
- Evaluation and Management of the Patient with New-Onset Hypertension/Secondary
- Causes of Hypertension
- Electrolyte Emergencies
- Treatment of Hypertensive Urgencies/Emergencies—Etiology/Case Presentations
- Management of the Patient with Stroke – Is There a Role for Thrombolytic Therapy?
- Recent Advances in Gastrointestinal Endocrinology
- Asthma (Pathophysiology/Treatment)
- Emergency Sedation
- Treatment of Migraines
- Pharmacological Treatment of Common Dermatologic Problems in Children and Adults
- Drugs for Movement Disorders
- Drug Treatment of Parkinson’s Disease
- Drugs and Sleep Disorders
- Treatment of Hemophilia
- Management of Seizure Disorders
- Principles and Update of Anti-Infective Agents
- Prescribing for the Pregnant Patient – Special Considerations
- Management of Common Infectious Diseases
- URIs/Typical-Atypical Pneumonias/Bone & Joint/Endocarditis
- Immunizations
- Management of Acute Poisoning (Acetaminophen, digitalis Glycosides, cyclic antidepressants, Salicylates, Beta-Blockers, etc.)
- Pharmacologic Advances in Pulmonary Hypertension
- Diffuse Arthralgias and Myalgias Treatment of Status Epilepticus
- Therapeutic Advances in the Management of Rheumatoid Diseases
- Role of Cyclooxygenase/COX-1 & COX-2 Inhibition
- Management of Childhood Infections – Otitis, Bacterial Meningitis
- Central Nervous System Pharmacology
- Pharmacology of Analgesics/Opioids for Pain Management
- What the Practicing Physician Should Know About Drug Metabolism
- Pharmacologic Management of Common Gastrointestinal Disorders
- Drugs for the Treatment of Depression
- Drug/Drug Interactions
- The Time to Prescribe – Prescription Writing
- Professionalism & Ethics

(Each student prepares an abstract and gives a 30-minute presentation)