### 970. Wave Motion in Continous Media

Spring of even-numbered years, 4(4-0) M E 870 or approval of instructor. Continuation of M E 870.

#### 999. **Doctoral Dissertation Research**

Fall, Winter, Spring, Summer. Variable credit. Approval of department.

# MEDICAL TECHNOLOGY

M T

# College of Natural Science

### Clinical Laboratory Science and 110. Health Care Delivery

Fall. 2(2-0)

The history and definition of medical technology, its diagnostic and therapeutic role in health care delivery, and its relationship to other allied health professions.

### Exploration of the Disciplines of the Clinical Laboratory Sciences

Spring. 2(2-0) Sophomores in medical technology.

Clinical laboratory disciplines including hematology, immunohematology, chemistry, microbiology, cytology, and histology through an examination of laboratory testing and its roles in the assessment, prevention, monitoring of health state.

#### 410. General Pathology

Spring. 3(3-0) ANT 316; PSL 432 or concurrently. Interdepartmental with the Department of Pathology.

Features of lethal and sublethal cell injury and inflammation and repair process. Definition of the major causes of pathologic change with a consideration of specific associated diseases.

#### 411. Basic Histopathology

Spring. 2(1-2) ANT 420, PSL 432; M T 410 or concurrently. Interdepartmental with the Department of Pathology.

Microscopic examination of cell injury and death, inflammation and tissue repair. Pathologic tissue changes in diseases resulting from degenerative changes, abnormal metabolism, neoplasia, immunologic processes, infection, mechanical trauma and malnutrition.

### 420. Hematology

Winter, Summer. 3(3-0) BCH 401, PSL 432.

Physiology, pathophysiology and laboratory assessment of hematological states.

### 421. Hematology Laboratory

Winter, Summer. 2(0-4) M T 420 or concurrentlu.

Laboratory techniques in hematology. Normal and abnormal blood cell morphology.

#### 430. Immunohematology

Fall, Spring. 3(3-0) MPH 462.

Genetics and immunology pertinent to blood group systems, antibody identification, and compatibility testing. Common practices of transfusion centers. Clinical correlations related to transfusion reactions and to hemolytic disease of the newborn.

### 431. Immunohematology Laboratory Fall, Spring. 2(0-4) M T 430 or concur-

rently.

Techniques relevant to practice of immunohematology. Special emphasis on blood typing, antibody screening and identification, compatibility testing, prenatal and postnatal testing, quality assurance and problem solving.

## Clinical Microscopy and Hemostasis

Winter, Summer. 2(2-0) PSL 432, BCH 401.

Renal physiology pertinent to the physical, chemical, and microscopic analysis of urine. The coagulation and fibrinolytic mechanisms including inherited and acquired diseases, laboratory testing and anticoagulant therapy.

## Clinical Microscopy and Hemostasis Laboratory 441.

Winter, Summer. 1(0-2) M T 440 con-

Routine urinalysis including the physical, chemical and microscopic examination. Semi-automated procedures for routine coagulation testing including prothrombin times, partial thromboplastin times, and factor assays.

### 46I. Medical Immunology and Microbiology

Winter. 5(5-0) MPH 301, MPH 302. Interdepartmental with and administered by the Department of Microbiology and Public Health.

The immune system, cellular interaction of the in vitro and in vivo reaction, and associated immunopathology. Characterization of infectious agents and their pathogenic processes.

## Independent Study

Fall, Winter, Spring, Summer. 1 to 5 credits. May reenroll for a maximum of 10 credits. Approval of department.

Independent study including assigned reading and reviews of appropriate scientific periodicals.

## MEDICINE

MED

# College of Human Medicine

## Infectious Diseases

Spring. 4(3-3) MPH 511, or approval of department. Interdepartmental with and ad-ministered by the Department of Microbiology and Public Health.

Infectious diseases of humans, including biology of the causative microorganism, epidemiology, pathogenesis, host-parasite relationships, clinical and laboratory diagnosis, and clinical management.

### 590. Special Problems in Medicine

Fall, Winter, Spring, Summer, 1 to 6 credits. May reenroll for a maximum of 12 credits. Human Medicine students or approval of department.

Each student will work under direction of a staff member on an experimental, theoretical or applied problem.

### 607. **Ambulatory Care Clerkship**

Fall, Winter, Spring, Summer. 1 to 3 credits. May reenroll for a maximum of 9 credits. H M 602. Interdepartmental with the departments of Community Health Science, Family Practice, and Pediatrics and Human Development. Administered by the Department of Family Practice.

Outpatient experience, lasting an equivalent of 34 half-days and extending over a minimum of 26 weeks. Continuous and comprehensive patient care under supervision of appropriate physicians.

### 608. Senior Medical Clerkship

Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 43 credits. Primary clerkship, third year Human Medicine students.

Based in community hospitals, this clerkship will stress interviewing skills, history, physical examination, along with problem solving and therapy, and care of the whole patient leading to independence in patient management.

### Hematology Clerkship 609.

Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 34 credits. MED 608.

Development of skills in data collection, problem solving and management related to common hematologic disorders of children and adults.

## Oncology Clerkship

Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 34 credits. MED 608.

Development of skills in data collection, prob-lem solving and management of the more prevalent cancers in children and adults.

### Cardiology Clerkship 611.

Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 34 credits. H M 602.

A clinical clerkship in which students evaluate in depth patients with cardiac diseases. This includes experiences with special diagnostic procedures including cardiac cuticularization, phonocardiography, echocardiography and electrocardiography.

### 612. Nephrology/Urology Clerkship

Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 34 credits. H M 602.

Integrated concepts of renal physiology and pathophysiology of renal disease. Clinical experience.

## 613.

Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 34 credits. H M 602.

Office based experience with a dermatologist to learn clinical skills in dermatology and develop observational and diagnostic skills in skin disease.

#### 614. Medical Chest Clerkship

Fall, Winter, Spring, Summer. 1 to 17 credits. May reenroll for a maximum of 34 credits. H M 602.

A clerkship covering four aspects of chest diseases: tuberculosis, diagnosis, pulmonary func-tion, and physiology. The student works with medical residents, utilizing outpatient and hospital facilities.