

# MEDICINE - MD (MED)

## MED 700: Internal Medicine Clerkship

12 Credits/Maximum of 12

The clinical Clerkship in Internal Medicine is designed to build upon your previous basic science knowledge and provide you with broad exposure to the content and practice of Internal Medicine. Your experiences during the Clerkship will include: "Med A" - One four-week block during which you will function as a team member on the inpatient General Internal Medicine service at the Hershey Medical Center or an affiliated institution, Holy Spirit Hospital, Lebanon Veterans Administration Medical Center, Pinnacle Health System, or University Park/Regional Campus. "Med B" - One two-week block during which you will rotate through a clinical selective in one of the Department of Medicine subspecialties (e.g. cardiology, hematology/oncology, gastroenterology, pulmonology, nephrology). "Med C" - One two-week block during which you will rotate through a clinical selective, primarily in the ambulatory setting, in one of the Department of Medicine subspecialties (e.g. general internal medicine, endocrinology, rheumatology, allergy-immunology).

**Prerequisite:** Successful completion of Phase I coursework & pass Step 1

## MED 715: Clinical Elective in Infectious Disease

5-10 Credits/Maximum of 10

Principles of human-host defense mechanism, host-parasite interactions, manifestations of various infections, systematic approach to problem solving, rational use of antibiotics.

**Prerequisite:** third-year core clerkships and permission of staff

## MED 721: Cardiology Elective for 3rd Year Students

5 Credits/Maximum of 5

Students learn non-invasive and invasive cardiology procedures, then work as clinical clerks on an in-patient cardiology service.

**Prerequisite:** successful completion of the first two years of medical school

## MED 722: Medicine Acting Internship

6 Credits/Maximum of 6

The Acting Internship (AI) in Internal Medicine is a four-week inpatient rotation that builds upon the Internal Medicine clerkship and provides a broad exposure to the discipline at an advanced practice level. During the rotation, you will have the opportunity to care for patients and perform the general functions of an intern under appropriate supervision on an inpatient service in Internal Medicine.

**Prerequisite:** Successful completion of Phase II coursework.

## MED 723: Clinical Elective in Gastroenterology

5-15 Credits/Maximum of 15

A program in clinical gastroenterology to expose student to basic GI physiology, pathophysiology, and management of gastrointestinal and liver problems.

**Prerequisite:** basic core clerkships

## MED 724: Clinical Elective in Hematology

5-15 Credits/Maximum of 15

Provides students with the basic understanding of the fundamental problems of hematology.

**Prerequisite:** third-year medicine core clerkship

## MED 725: Clinical Elective in Medical Oncology

5-15 Credits/Maximum of 15

Introduces students to cancer chemotherapy and immunotherapy with emphasis on workings of lymphoma and solid tumor patients.

**Prerequisite:** third-year medicine core clerkship

## MED 727: Elective in Pulmonary Medicine

5-15 Credits/Maximum of 15

A clinical program in pulmonary medicine with emphasis in pulmonary physiology, pathophysiology, and patient diagnosis and management.

**Prerequisite:** basic third-year core clerkships

## MED 728: Clinical Program in Nephrology

5-10 Credits/Maximum of 10

Problems in clinical nephrology with emphasis placed on a pathophysiologic approach. Introduction to renal biopsy, peritoneal dialysis, and hemodialysis.

## MED 729: Clinical Program in General Internal Medicine

5-15 Credits/Maximum of 15

Introduction to the variety of illnesses and problem-solving techniques of the general internist.

## MED 733: Medicine Cardiology Acting Internship

6 Credits/Maximum of 6

The Acting Internship (AI) in Cardiology is a four-week inpatient rotation that builds upon the Internal Medicine clerkship and provides a broad exposure to the discipline at an advanced practice level. During the rotation, you will have the opportunity to care for patients and perform the general functions of an intern under appropriate supervision on the "Acute Cardiology" or "Congestive Heart Failure" services.

**Prerequisite:** Successful completion of Phase II coursework.

## MED 734: Clinical Elective in Endocrinology

5-15 Credits/Maximum of 15

Expose students to a large number of clinical endocrine problems, familiarize them with diagnostic laboratory procedures used in evaluating patients.

**Prerequisite:** basic core clerkships

## MED 736: Clinical Management of Obesity

5 Credits

This course provides exposure to the multifaceted area of obesity management, including diabetes, bariatric surgery, medical management and pediatrics

**Prerequisite:** successful completion of any third year course which includes direct patient care; permission of instructor required (email Dr. Boan or Dr. Ku); or successful completion of second year medical school at Penn State University Coll

## MED 737: Clinical elective in Rheumatology

2.5 Credits/Maximum of 2.5

The Clinical Rheumatology elective is a TWO-week course that is designed to cover the rheumatologic conditions that are most germane to any practitioner. The course will provide an introduction to common and some less common diseases that affect the joints and systemic immune system. This course is focused on those conditions that should be known by practitioners in any field. Course material will be presented in the form of bedside teaching in the clinic and on inpatient consultation rounds, weekly teaching sessions with other trainees, conferences with faculty, and readings from textbooks and online learning modules. Central themes of the course are recognition and diagnosis of these diseases, use and interpretation of diagnostic tests and familiarity with major rheumatologic therapeutics. Students will be expected to be able to generate a differential diagnosis for patients being evaluated in clinics or on inpatient consultation rounds.

**Prerequisite:** Participation in an accelerated pathway

## MED 738: Clinical Elective in Cardiology--Consultation Service

5 Credits/Maximum of 5

Students evaluate and follow in-patients on general non-cardiology services with cardiac problems referred to the Cardiology Consult Service.

**Prerequisite:** satisfactory completion of the Third Year Medicine Core Clerkship

## MED 742A: Allergy and Immunology Clinical Elective for 3rd Year Students

2.5 Credits/Maximum of 2.5

Allergy and Immunology Clinical Elective for 3rd year students.

**Prerequisite:** permission of instructor

## MED 745: Geriatric Elective

5 Credits

Students will perform assessments and develop care plans for hospitalized elders who are transitioning to home or long-term care setting.

**Prerequisite:** successful completion of all required clerkships

## MED 746: Introduction to Women's Health in Internal Medicine

4 Credits/Maximum of 4

Students in this elective will participate in clinical experiences focused in primary care for patients assigned female at birth or who identify as women. Clinical experiences are 30 hours/week for 4 weeks with most sessions in the internal medicine ambulatory clinic with physicians who have a women's health focus. Additional clinical experiences include, but are not limited to, rotations at planned parenthood, pelvic floor physical therapy, breast clinic, and the pelvic pain clinic. Students will have the opportunity to complete notes, practice oral presentations, and devise assessment and plans in clinic and to meet with faculty in internal medicine women's health to discuss how they became interested in this field. Participants will also join the internal medicine residents for their ambulatory half day didactics on two half days. The remainder of time during the elective will be for weekly meetings with the course director to reflect on clinical experiences and to work on assignments in women's health quality improvement, advocacy, research, and education.

**Prerequisite:** Successful completion of Phase II

## MED 747: Pediatric Allergy, Asthma and Immunology Elective

5 Credits/Maximum of 5

This course provides exposure to basic concepts for diagnosis and management of children and adults with allergic and immunologic diseases and respiratory and cutaneous abnormalities. MED 747 Clinical Elective in Allergy, Asthma and Immunology (5)The fourth year student rotating on the allergy service will experience an active and up to date Allergy and Immunology clinical service. Diseases you will be managing include allergic skin disorders, asthma, sleep, rhinitis, sinusitis, primary immunodeficiencies, recurrent infections, drug, food and insect allergy, and anaphylaxis. Developing an excellent history to include occupational, environmental and travel history will be facilitated. The student will be able to participate as an active member of the clinic and will have responsible for the patient. We anticipate that you will act as an intern and will manage the patient completely from start to finish. Clinic hours are daily 8 AM to 5 PM except Weds AM which is our academic time. In addition, to clinic there is an opportunity to participate in inpatient consults; however, the majority of time (90%) will be spend in the clinic seeing patients. Techniques include skin biopsy, skin test, patch testing, spirometry, and patient education and there will be ample opportunity to practice these techniques. Most of the education is done bedside during the patient's visit. Lastly, we expect that the student will present a short power point presentation, develop a manuscript or participate in research if time permits.

**Prerequisite:** successful completion of the 3rd year required clerkships  
Cross-listed with: PED 747

## MED 748: Adult Rheumatology Elective

5 Credits

This course provides exposure to concepts utilized in the diagnosis and management of rheumatic diseases in adults. MED 748 Adult Rheumatology Elective (5)This course is designed to introduce fourth year medical students to the basics of evaluation and management of adults with musculoskeletal disease with an emphasis on diagnosis and treatment of inflammatory and non inflammatory arthritis. This primarily outpatient experience will build on the concepts presented during the second year didactic course in MSK medicine that dealt with

rheumatology topics as well as the Island I MSK portion which utilized physical diagnosis skills related to musculoskeletal joint evaluation. Students on this elective will serve as an integral part of the team and will be the first contact with returning and new patients in the outpatient clinic setting having had a chance to interact one on one with patients in order to practice history taking and exam skills. Students will then present the information to the attending physician where management and treatment options will be discussed. Pertinent physical exam and radiographic findings will be noted and technique for joint aspiration and injection will be demonstrated in the appropriate patients. Students will be expected to demonstrate evidence of independent reading on rheumatology topics and preparation of case based presentations for weekly conferences. Opportunities for interested students to participate in pediatric rheumatology clinics are also available during this time. The overall goal of this elective is to allow students to attain the basic skills and knowledge necessary for the initial evaluation and diagnostic work up of common presenting musculoskeletal complaints in the primary care outpatient and in-patient settings. Emphasis will be placed on pathophysiology, differential diagnosis, physical exam findings and management options as well as the essential portions of the history and physical exam. Students will be encouraged to practice their musculoskeletal exam skills under supervision in order to become proficient by the end of the four week elective. Evaluation methods will include a pre-test and post-test as well as subjective evaluation of students' fund of knowledge and patient care skills by the attending rheumatology faculty. This course will be offered throughout the entire academic year.

**Prerequisite:** completion of all of the third year core clerkships

MED 749: Medical Intensive Care Acting Internship

6 Credits/Maximum of 6

The Medical Intensive Care Unit (MICU) Acting Intern (AI) offers the opportunity for 4th year medical students to serve as an intern provider on a team caring for critically ill adults and the management of the effects of critical illness on them and their families. The AI will be exposed to all the facets of critically illnesses and also participate in bedside procedures, resuscitation, organ support and management. The AI will work with all members of the MICU team during their rotation. The AI will be introduced to the members of the team during the first day of the rotation. The AI should function with direct and indirect supervision to gather focused patient information during the history and physical exam in a time effective manner, and use critical thinking and advanced knowledge to guide judgement and medical decision making in a semi-autonomous fashion. The AI will take primary responsibility and be accountable for patient care, management, follow up, and reassessment throughout all phases of clinical care from admission to discharge. The AI will be expected to exemplify professional behavior, communication, and teamwork with patients and families, interprofessional care team members and interdisciplinary consultants at the level of a resident intern. Prioritization and timely coordination of patient care activities will be the responsibility of the AI, including smooth and effective transfers of care, discharge planning, and necessarily follow up. The AI student will also display appropriate team leadership and teaching activities when applicable. During this specific rotation, the AI will be immersed within the specialty of medical critical care and will use advanced medical knowledge and practice during direct and indirect patient care in a collaborative and inter-professional manner.

**Prerequisite:** Successful completion of Phase II requirements.

MED 757: Medicine Hematology-Oncology Acting Internship

6 Credits/Maximum of 6

The Acting Internship (AI) in Cardiology is a four-week inpatient rotation that builds upon the Internal Medicine clerkship and provides a broad exposure to the discipline at an advanced practice level. During the rotation, you will have the opportunity to function as an intern under appropriate supervision and admit and care for patients on the "Blue team" inpatient service in Hematology-Oncology.

**Prerequisite:** Successful completion of Phase II coursework.

MED 759: Oral Anticoagulants

5 Credits/Maximum of 5

Oral anticoagulants are one of the more frequently prescribed classes of medications to treat common diagnoses (e.g., deep vein thrombosis, pulmonary embolism, nonvalvular atrial fibrillation) as well as utilized in rather complex patient populations such as transplant, oncology, and those receiving mechanical circulatory support. The appropriate use of oral anticoagulants also requires an understanding of the biochemistry of coagulation and the pathophysiology behind bleeding and thrombosis. The goal of this course is to provide students with a foundational understanding of the appropriate use of oral anticoagulants in the outpatient setting from a multidisciplinary perspective. Students will apply their knowledge of biochemistry of coagulation, the pathophysiology of bleeding and thrombosis, and the pharmacology of oral anticoagulants learned throughout Phase I during case discussions, journal club, conferences, and when participating in the direct patient care thrombosis clinic. They will work with a multidisciplinary health care team and contribute to the continuity of care these patients require in an outpatient setting.

**Prerequisite:** Requires successful completion of Phases I and II courses and clerkships. Builds off Phase II coursework.

MED 796: Medicine Individual Studies

5 Credits/Maximum of 5

Clinical or laboratory research on a selected topic by special arrangement with member of faculty who will act as preceptor.

**Prerequisite:** successful completion of 3rd year core clerkships. Student must contact course director for prior approval before registering for this course.

MED 796A: Medicine Individual Studies for 3rd Year

2.5 Credits

Medicine individual studies for 3rd year.

MED 797: Medicine Special Topics

5 Credits

Advanced clinical training in internal medicine or subspecialty –neurology, cardiology, clinical pharmacology, hematology, gastroenterology, endocrinology, pulmonary medicine, renal disease.

**Prerequisite:** successful completion of 3rd year core clerkships. Student must contact course director for approval prior to registering for course.

MED 797A: Cardiorespiratory

4 Credits

Cardiorespiratory

MED 797B: Reproductive Medicine/Endocrinology

6 Credits

Advanced clinical training in internal medicine or subspecialty  
–neurology, cardiology, clinical pharmacology, hematology,  
gastroenterology, endocrinology, pulmonary medicine, renal disease.

MED 797D: Profession of Medicine II

2 Credits

Advanced clinical training in internal medicine or subspecialty  
–neurology, cardiology, clinical pharmacology, hematology,  
gastroenterology, endocrinology, pulmonary medicine, renal disease.

MED 797E: Translating Health Care Science

1 Credits

Advanced clinical training in internal medicine or subspecialty  
–neurology, cardiology, clinical pharmacology, hematology,  
gastroenterology, endocrinology, pulmonary medicine, renal disease.