

Internal Medicine

Before being assigned to an inpatient medical service, all students learn techniques of obtaining a medical history and performing a physical examination. Each student must then take an 8-week Basic Medicine Clerkship in internal medicine. After successful completion of this phase of education, students interested in obtaining greater mastery of the content and principles of internal medicine may choose from a variety of advanced clerkships and electives in medical subspecialties.

MED 900. Internal Medicine Clerkship. 0-8 Credits.

The Internal Medicine 8-week Clerkship will prepare the student to perform thorough and accurate history and physical examinations, select and interpret appropriate diagnostic testing, and create assessments and plans for adult patients as their level of training allows. The clerkship will begin with an orientation followed by a week of didactics including CBCLs, lectures, and flipped classroom activities that will enable students to tackle common problems presenting in both inpatient and outpatient settings in internal medicine. Teaching is provided by Inpatient Hospitalists, Ambulatory Faculty, and Internal Medicine Specialists with a focus on effective history-taking and cardiopulmonary examinations. The didactic week is followed by 6 weeks of clinical rotation blocks with a variety of Internal Medicine Specialties including General Internal Medicine, Infectious Disease, Ambulatory Medicine, and Pulmonary Medicine with rotations taking place at the University of Kansas Health Center and Outpatient Clinics as well as the Kansas City Veterans Administration Hospital. In the final clerkship week, students complete an OSCE and have preparatory time for their SHELFF examination. Prerequisite: Completion of Phase I (Years 1 and 2).

MED 901. General Medicine--Veterans Administration Medical Center. 4 Credits.

The student will be assigned to one of the general medical wards where the student will function in the role of subintern (e.g., the student will be assigned patients to work up and will be expected to assume partial responsibility for their diagnostic and therapeutic program). The number of patients assigned and the amount of responsibility given will vary with the student's ability. At all times the student will work closely with a staff physician or senior resident who will be responsible for the student's education. Offered in modules I-XII. Prerequisite: MED 900.

MED 902. Advanced Topics in Internal Medicine. 4 Credits.

Offered in modules I-XII. Prerequisite: MED 900 and special arrangement with department.

MED 903. Research Topics in Internal Medicine. 4 Credits.

Offered in modules I-XII. Prerequisite: Special arrangement with department.

MED 905. Critical Care: Coronary Care Unit. 4 Credits.

Critical care is an integral aspect of medical education. The purpose of the 4th-year critical care selective rotation is to allow students to participate in the management of the critically-ill patient in a specialty area of interest not experienced during the third year of training. Each subspecialty critical care rotation provides the student with the core knowledge necessary for the care of critically-ill patients, an appreciation of management issues unique to this patient population, and the technical skills that one must incorporate for effective patient care. The student will act as an integral part of the critical care team with an emphasis on increased patient care responsibility and autonomy. Most importantly, this educational purpose will be founded on the core competencies set forth by the University of Kansas School of Medicine. Clinical work will be supplemented by conferences and other educational activities. This

course fulfills the Critical Care Selective requirement. Prerequisite: fourth year standing.

MED 906. Advanced General Medicine - Leavenworth Veterans Administration Medical Center. 4 Credits.

The student will function in the role of a sub-intern on the Medicine I Teaching Service. He/She will assume partial responsibility for the diagnostic and therapeutic program for assigned patients. The number of patients and level of responsibility will be accommodated to the individual's educational goals and ability. Emphasis will be placed on the clinical and practical approach to the patient including differential diagnosis, pathophysiology, and management strategies. At all time the student will work closely with the Chief, Medical Service who is in charge of the Teaching Unit. Evaluation of the student's performance during the clerkship will be based on faculty's assessment of the student's clinical and conference participation. Prerequisite: MED 900.

MED 907. Ambulatory Specialties Selective in Dermatology. 2 Credits.

Two-week course composed of outpatient clinic experience, tutorial sessions, and audiovisual material available in the educational resource center (ERC) will enable the medical students to diagnose the most prevalent skin diseases and perform an adequate history and physical examination needed to establish these diagnoses. There will be an opportunity to attend a monthly Kansas City Dermatological Society meeting on the third Thursday of most months, and attend at least twice weekly conferences given by the dermatology residents to the medical students. Prerequisite: fourth year standing.

MED 908. Subinternship in Internal Medicine. 4 Credits.

The objective of this course is to provide students with advanced experience in the management of acutely-ill medical patients. Students will be assigned to Kansas University Medical Center and will participate in the diagnosis and treatment of common medical conditions in a role similar to that of a resident. Clinical work will be supplemented by conferences and other educational activities. This course fulfills the Subinternship Selective requirement.

MED 909. Clinical Elective in General Medicine Consultation and Hospital Based Medicine Practice. 4 Credits.

The student(s) will be exposed to the arena of general medicine consultation and hospital based medicine practices. The students would be responsible for performing initial evaluation and work up of new general medicine and/or geriatric consultations as well as the ongoing care of the patient's medicine issues. This experience would be unique in that the attending of record is not a general internist but often a surgeon, rehab specialist, etc. The students would learn the art and science of being a consultant-from evaluating medical conditions as they arise in the surgical and rehabilitating patient communicating with referring physicians, providing concurrent care, diagnostically and therapeutically of serious ongoing medical issues. In addition, the student would become well versed in the pre-operative evaluation of patients, as this can be a substantial part of a general internist's practice. Finally, the student will gain insight to what it is like to have a hospital-based practice by working directly with two hospitalists for KUMC. One of the responsibilities of the elective would be to prepare and give a short presentation on an issue of consultative medicine that would be presented in small group format but could also be used in care-based format to present in other arenas if so desired.

MED 910. Clinical Cardiology. 4 Credits.

This course in cardiology offers an experience in the clinical evaluation and treatment of patients with a variety of cardiovascular problems. The students, as sub-interns, will function on the cardiovascular service as an integral part in the care of the seriously-ill patient with a wide range of

problems. The students will participate in cardiovascular rounds with one of the members of the cardiology staff, during which time clinical skills in bedside diagnosis and auscultation will be emphasized and developed. They will have an opportunity to develop expertise in the interpretation of electrocardiograms daily. The treatment of arrhythmias and heart failure will be stressed. They may also have an opportunity to follow patients through cardiac catheterization procedures or TEE and to participate in the computation and assessment of the catheterization date. The elective schedule includes two weeks on CV1, one week on consult rounds (CON1), and one week on advanced heart failure rounds.

MED 911. Coronary Care Unit and Electrocardiography--Veterans Administration Medical Center. 4 Credits.

The student will function as a subintern in the Coronary Care Unit with the cardiovascular fellow and cardiology subspecialty resident. The patient material consists of all the patients in the VA medical center with acute myocardial infarction, rule out acute myocardial infarction, pre-infarction syndrome and problem arrhythmias. The student will also develop expertise in electrocardiography and read a portion of the daily EKG's independently and in collaboration with the cardiovascular resident or fellow and the cardiologist. Offered in modules I-XII. Prerequisite: MED 900 or permission of instructor.

MED 912. Critical Care: Medical Intensive Care Unit. 4 Credits.

Critical care is an integral aspect of medical education. The purpose of the 4th-year critical care selective rotation is to allow students to participate in the management of the critically-ill patient in a specialty area of interest not experienced during the third year of training. Each subspecialty critical care rotation provides the student with the core knowledge necessary for the care of critically-ill patients, an appreciation of management issues unique to this patient population, and the technical skills that one must incorporate for effective patient care. The student will act as an integral part of the critical care team with an emphasis on increased patient care responsibility and autonomy. Most importantly, this educational purpose is founded on the core competencies set forth by the University of Kansas School of Medicine. Clinical work will be supplemented by conferences and other educational activities. This course fulfills the Critical Care Selective requirement.

MED 914. Philmont Medicine. 4-8 Credits.

The Philmont Medicine experience is in the high altitude environment at Philmont Scout Ranch in New Mexico. Students learn health screening, care of sports injuries, and diagnosis and management of pediatric, medical, surgical, gynecologic problems, primarily of teenagers, but also of children and adults. Supervision of students consists of faculty members from Medicine Pediatrics, Surgery, Neurology, Family Practice, Gynecology, and Physical Medicine in an effort to give well-rounded educational guidance to the students. National Board, Part 1, must be passed in order to receive clinical elective credit. One four-week experience only counts toward clinical electives requirements. Permission of Instructor. Prerequisite: Physical Diagnosis, Pathology and Pharmacology.

MED 915. Comprehensive Care of the Complex Adult. 4 Credits.

The objective of this four week elective is to enhance the student's ability to care for complex adult patients in various systems of care. Clinically, the student will rotate through selected clinical centers of care at the University of Kansas. There will be a focus on three facets of the care: the clinical content and context, the patient's experience and the structure of the specific systems of care. Through experience, didactic presentations on systems of care, focused observation and reflection, the student will be able to better define the organization of clinical systems of care and to recognize how to 'diagnose' and to help collaborate in improving systems of care. These skills will likely be of great benefit

for understanding elements of the core competency of 'systems based practice', and practically applying that knowledge to the new systems of care encountered in residency.

MED 920. Advanced Gastroenterology. 4 Credits.

This course is directed towards problems of gastrointestinal disease. The clinical student sees inpatient consultations and outpatient consultations with an emphasis on the inpatient side. About 75% of the experience is with General Gastroenterology and the remainder with Hepatology including care of liver transplant patients. The student will also observe several diagnostic and therapeutic endoscopy procedures. Prerequisite: MED 900 or permission of instructor.

MED 921. Gastroenterology Clerkship--Veterans Administration Medical Center. 4 Credits.

The manifestations of gastrointestinal disease will be presented to the student by participation in consultation rounds and endoscopy. The student will be a member of a team composed of a staff gastroenterologist, a fellow, and a medical resident. At the completion of the course, the student will be familiar with the manifestations of gastrointestinal diseases, their diagnostic evaluation, and their treatment. The student will learn the indications and contraindications of gastrointestinal procedures. The student will be evaluated on a daily basis by the staff gastroenterologist as the student interviews and examines patients and makes recommendations for their diagnostic and therapeutic measures on consultation rounds. Prerequisite: MED 900 or permission of instructor.

MED 923. Gastroenterology--Special Programs. 4 Credits.

Combination of the preceding GI electives as desired by the student upon consultation with the senior GI staff. Offered in modules I-XII. Prerequisite: MED 900 and MED 920 or MED 921.

MED 925. Interdisciplinary Community Partnership. 4 Credits.

This course offers an interdisciplinary eight-week experience outside tertiary care, dealing with community health issues and impact on individual and population health. Students will be engaged on-site with social service, public health agencies, and/or indigent-care clinics. Students will contribute to services related to disease prevention, health promotion, quality of life, health insurance, poverty prevention and other healthcare issues. Students will gain insight into the challenges of specific populations within the community, as well as the agencies and programs that serve their needs. Students will complete a comprehensive project related to a particular need of the agency and/or the population that they agency serves. Common examples include needs assessments, grant development, health interventions, research surveys, and curriculum development. In addition, students will be required to complete an oral or poster presentation describing their project, and a written report of their internship experience.

MED 930. Clinical Hematology. 4 Credits.

This will consist of inpatient and outpatient care, dealing with all types of hematologic disorders. The student will be given experience and instruction in morphology of peripheral blood and bone marrow. Weekly conferences, didactic and participating study sessions with the hematology staff will be conducted. Offered in modules I-XII. Prerequisite: MED 900 or permission of instructor.

MED 935. Infectious Disease. 4 Credits.

Students participating in this elective will be assigned to an inpatient Infectious Diseases consultation service and provided the opportunity to participate actively in the assessment of new consults and follow-up care under the supervision of Faculty and Fellows in the Division of Infectious Diseases. Infectious Diseases consultative care provides invaluable experience in developing skills in history-taking, evaluation of social and exposure histories, physical examination, and in inpatient and outpatient

management of both common and rare infections. The ID consultation service provides a wide spectrum of experience including nosocomial infections, infections in immunosuppressed patients including HIV, and fever of unknown origin, as well as many other conditions. Students will also be exposed to experiences in clinical microbiology, antimicrobial stewardship, and care of patients in a variety of medical specialties with consultations from surgical teams, General Medical and Family Medicine teams as well as Critical Care, Neurology, and Obstetrics. A solid background in infectious diseases will aid the student in cultivating skills needed for residency and that will be used regularly in ANY field of future practice. Prerequisite: MED 900 or permission of instructor.

MED 936. Infectious Disease Elective at Kansas City Veterans Administration Medical Center. 4 Credits.

The Infectious Disease Section at the VA medical center is responsible for an active inpatient consult service. The student will be responsible for seeing the consult patients with the resident and/or Infectious Disease fellow, recommending initial diagnostic and therapeutic management, and presentations to the Infectious Disease staff physician. The clinical experience will be supplemented with didactic discussions and an introduction to medical microbiology in the clinical laboratory. Offered in modules I-XII. Prerequisite: MED 900 or permission of instructor.

MED 940. Endocrinology and Metabolism, Clinical. 4 Credits.

Introduction to endocrinology and metabolism with special emphasis on diagnosis and management of selected patients with this category of disease. Students will participate directly in patient evaluation. Offered in modules I-XII. Prerequisite: MED 900 or permission of instructor.

MED 941. Research Problems in Endocrinology and Metabolism. 8 Credits.

Two consecutive four-week modules that will provide the interested student with laboratory and research experience necessary for clinical investigation of specific problems in endocrinology and metabolism. The student may either pursue an independent research problem or participate in a research project currently under investigation by a staff member. The student will be required to submit a written report and deliver a seminar at a Sectional Research Conference. An objective of this course will be to obtain data suitable for publication or presentation at Student Research Day. Offered in modules I-XII. Prerequisite: Special arrangement with staff.

MED 950. Clinical Nephrology-University of Kansas Medical Center. 4 Credits.

The Division of Nephrology is active at the University of Kansas Medical Center. The activities of this division center on the diagnosis and treatment of patients with medical diseases of the kidney. Clinical clerks are assigned patients on the inpatient service, the outpatient clinic and in the outpatient chronic hemodialysis unit. The clerks are expected to function at a subintern level. Under the guidance of the house staff they provide the primary work up, write the admitting orders and assist in performing procedures such as peritoneal dialysis and hemodialysis. Clerks and house staff meet regularly with the attending staff nephrologist to discuss specific topics in renal physiology and pathogenesis. A formal nephrology conference for all housestaff and students is held weekly. The clerk is encouraged to participate in one of the ongoing research projects. Two positions are available at the University of Kansas Medical Center. Offered in modules I-XII. Prerequisite: MED 900.

MED 951. Research Problems in Basic and Clinical Nephrology. 4-8 Credits.

Investigation of specific problems in nephrology. One or two modules consecutively. Offered in modules I-XII. Prerequisite: Arrangement with staff.

MED 960. Pulmonary/Critical Care. 4 Credits.

Students will be assigned to the Respiratory Intensive Care Unit. Under direct supervision of a Senior Medical Resident and a Pulmonary/Critical Care Fellow they will participate in the care of patients hospitalized in the Respiratory Intensive Care Unit. Daily attending rounds emphasize correlation of clinical, radiographic, laboratory, and invasive physiologic data in managing critically ill patients. Extensive experience in ventilator management and invasive monitoring. Students are on pager contact so they may be notified and participate in critical care decision making. Offered in modules I-XII. Prerequisite: MED 900 or permission of instructor.

MED 961. Pulmonary Medicine, Physiology. 4 Credits.

Students will be assigned to the pulmonary function laboratory to learn the technique and interpretation of pulmonary function tests. Under the immediate supervision of a pulmonary technician and a pulmonary disease fellow, students will observe, perform, and interpret the various tests of lung function. Clinical correlation will be obtained via attendance at inpatient, outpatient, and consultation rounds where clinical problems will be related to physiologic finds. Offered in modules I-XII. Prerequisite: MED 900 or permission of instructor.

MED 962. Chest Disease Medicine--Veterans Administration Medical Center. 4 Credits.

The student on the Chest Disease Service at the Veterans Administration Medical Center will be assigned as a subintern on the Inpatient Medicine Unit where they will be assigned to primary care of a small number of selected chest disease patients. The student will be directly responsible for the patient's diagnostic and therapeutic management under the specific supervision of the chest disease fellow and chief of chest disease section at the VA Medical Center. There will be seminar and didactic instruction on natural history of the frequently occurring chronic chest diseases. The student will assist in procedures such as fiberoptic bronchoscopy, pneumo-thorax intubation, thoracentesis, and pleural biopsy and will observe and perform common procedures of pulmonary function testing with patients. They will assist with chest disease consultations from other services with the chest disease resident and will be expected to attend and participate in all conferences of the chest disease section. The student will participate in inhalation therapy procedures including ventilator management. They will be expected to complete and discuss a small required reading list from selected texts and journal articles. The objective of the elective is to give a student concentrated but comprehensive actual experience in the management of the chest disease performance section of the VA medical center in writing at the completion of the elective. Prerequisite: MED 900 or permission of instructor.

MED 969. Clinical Oncology--Veterans Administration Medical Center. 4 Credits.

The student will participate in both in- and outpatient cancer management, consult rounds, and twice-weekly teaching conferences. Emphasis will be on clinical investigations of new and established anticancer drugs, and on the application of pharmacokinetic and cytokinetic studies to the treatment of cancer. Evaluation of the student's general clinical skills and acquisition of knowledge in oncology will include direct observation of clinical performance and conference participation, and a brief objective examination. Offered in modules I-XII. Prerequisite: MED 900.

MED 970. Clinical Oncology Elective. 4 Credits.

The student will participate actively in the care of the oncology patients on an in- and outpatient basis. This includes participation in consultation rounds, and subspecialty clinics. Clinical investigation with both conventional and experimental drugs will be stressed and an opportunity to treat patients on cancer-specific protocols will be provided. Offered in modules I-XII. Prerequisite: MED 900 or permission of instructor.

MED 971. Advanced Studies in Clinical Oncology. 4 Credits.

This is an advanced course with emphasis on consultations with attending staff and fellows, investigative protocol studies and special projects, including lectures and conferences. There will be outpatient activity, but no inpatient care. Offered in modules I-XII. Prerequisite: MED 900 and MED 970 or MED 969.

MED 972. Palliative Medicine. 2-4 Credits.

This elective rotation serves to expose the student to palliative care in the hospital setting. The student will work with a team of physicians, advanced practice providers, social workers and other learners as they take care of patients at all stages of illness. Clinical focus will be to gain knowledge and skills in practical symptom management, ascertaining goals of care, understanding and communicating prognosis, and addressing psychosocial needs. There will be specific emphasis on understanding the relationship between hospice and palliative care, the complexities of health care delivery for the seriously ill, and working as part of an interprofessional team. Prerequisite: MED 900.

MED 980. Clinical Allergy, Immunology, and Rheumatology. 4 Credits.

Students will participate in a split rotation with KUMC allergy outpatient clinics and rheumatology inpatient service (2 weeks each). Students will perform medical evaluations, select appropriate diagnostic procedures and define specific therapy on assigned patients under the supervision of the staff. They will receive an orientation to clinical testing in current use and be expected to interpret the results of these appropriately. #Lectures by the staff #and fellows are given in areas of allergy and rheumatology that are held weekly in a virtual setting. Prerequisite: MED 900 or permission of instructor.

MED 981. Advanced Allergy, Immunology, and Rheumatology. 4 Credits.

The activities outlined in MED 980 will be continued, but the student will have more responsibility for patient evaluation and management. With guidance, another topic will be chosen for seminar presentation at the end of this clerkship. Offered in modules I-XII. Prerequisite: MED 900 and MED 980.

MED 982. Research Problems in Allergy, Immunology, and Rheumatology. 4 Credits.

Three consecutive modules are necessary to give the student adequate time to pursue an independent research problem or a project currently under investigation by a staff member. The student will be required to submit a written report and give a seminar at a division research conference during the final module. Offered in modules I-XII. Prerequisite: Special arrangement with division.

MED 990. Geriatric Medicine - Leavenworth Veterans Administration Medical Center. 4 Credits.

The student will function in the role of a sub-intern, with supervised responsibility for management of patients in a special assessment unit for the elderly, a nursing home, and an outpatient clinic. In addition to daily teaching rounds, students will participate in seminars covering physiology of aging, altered presentation of illness in the elderly. Evaluation of the student's performance during the clerkship will be based on faculty's assessment of the student's clinical skills and conference participation. Prerequisite: MED 900.

MED 995. Dermatology. 4 Credits.

This course is composed of outpatient clinic experience, tutorial sessions utilizing audiovisual aids extensively, and inpatient teaching rounds, as well as frequent reviews of pertinent aspects of dermatological allergy, microbiology, and histopathology. There will be opportunities to attend special weekly dermatological basic science lectures and grand rounds. Acquired skills in dermatological diagnosis (disease recognition, as well

as analytical reasoning, or problem-solving) and in dermatological therapy will be evaluated by a presentation at the end of the rotation. Prerequisite: MED 900.

MED 996. Research Problems in Dermatology. 4 Credits.

A four-week research elective in which the student undertakes an original investigation in dermatology or participates in an ongoing project, in either case under the direct supervision of a dermatology faculty member. A written report at the end of the module summarizing the student's findings will be required. Modules I-XII, limited to one student per module. Prerequisite: Medical Basic Sciences and by special arrangement with staff.

MED 998. Advanced Studies in Geriatric Medicine. 4-12 Credits.

An advanced course of one to three months specially arranged for each student to encompass a clinical research project. There will be participation in clinics and consultations as appropriate. Offered in modules I-XII. Prerequisite: MED 900.

MED 999. Internal Medicine Student Chief Elective. 4 Credits.

Students selected for enrollment in this elective will serve as "Internal Medicine Student Chiefs" in association with the required Internal Medicine clerkship. IM Student Chiefs will help to orient M3 students to expectations of the Internal Medicine clerkship and student roles. The IM Student Chiefs are to serve as student leaders and be available to the M3 students on the Internal Medicine clerkship for support with experience, understanding and skills required to successfully complete the IM Clerkship. Student IM Chiefs will have roles in organization of rotations, as a liaison to faculty and will be provided educational modules on Clinical education. Students interested in being an IM Student Chief need to apply with support from their Coach and support from 1 additional faculty member and will be selected by the IM Clerkship Leadership as space allows. Please email for application packet or information to ltandberg@kumc.edu. Prerequisite: MED900.