

***INTERNAL MEDICINE SYLLABUS***  
***THIRD YEAR MEDICINE SELECTIVES***



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# INTERNAL MEDICINE GOALS AND OBJECTIVES

## GOALS:

1. Learn the personal and professional characteristics of a physician that you would allow to care for your family.
2. Learn the core concepts and clinical skills of Internal Medicine specific to each selective course.
3. Have fun.

## OBJECTIVES:

### **1. Patient Care**

- a. Demonstrate proper techniques for interviewing a patient to obtain a medical history and performing a physical examination.
- b. Demonstrate analysis, synthesis, and integration of pertinent patient data.
- c. Formulate a comprehensive, ordered differential diagnosis.
- d. Demonstrate an ability to build a positive, healing relationship with a patient.

### **2. Professionalism**

- a. Demonstrate professional demeanor and ethical behavior.

### **3. Medical Knowledge**

- a. Apply knowledge of the pathophysiology, epidemiology, and natural history of diseases to the diagnosis and management of common patient conditions in Internal Medicine.

### **4. Interpersonal Skills and Communication**

- a. Present patient data gathered from patient interviews, physical examinations, and laboratory sources, including progress notes on patients, in standardized format.
- b. Document patient data gathered from patient interviews, physical examinations, and laboratory sources, including progress notes on patients, in standardized format.
- c. Demonstrate effective and professional interpersonal and communication skills in interactions with patients and families, including an awareness of psychosocial factors related to patients' problems.

### **5. Practice Based Learning and Improvement**

- a. Use evidence based medicine to determine patient care decisions.
- b. Identify errors in patient care and knowledge deficits. Change future practices based on past mistakes.
- c. Use information technology successfully to access and manage patient information.

### **6. Systems Based Practice**

- a. Demonstrate appreciation and collaboration with other members of the health care team including nursing, social workers, care managers, pharmacy etc as applicable to the specific course.
- b. Identify issues related to the cost-effectiveness of diagnostic evaluations and patient care.

## DESCRIPTION OF MEDICINE SELECTIVES

These three weeks are an experience in the daily work schedule of the subspecialty division to which you are assigned. This experience may include wards, consultations, clinics and conferences.

<p><b>Gastroenterology Selective</b></p>	<p><b><u>PATIENT CARE</u></b></p> <ol style="list-style-type: none"> <li>1. Properly interview a patient being admitted to GI service to obtain a complete medical history.</li> <li>2. Perform a comprehensive physical examination.</li> <li>3. Formulate a plan of care</li> <li>4. Document and present admission patient data gathered from patient interview, physical examination, tests along with differential diagnosis and treatment plan.</li> <li>5. Document daily progress notes on inpatients.</li> </ol> <p><b><u>MEDICAL KNOWLEDGE</u></b></p> <ol style="list-style-type: none"> <li>1. Formulate a comprehensive differential diagnosis for patients presenting with gastrointestinal complaints</li> <li>2. Order and interpret with supervision appropriate diagnostic tests (labwork, radiology, endoscopic procedures, etc.) related to the differential diagnosis.</li> <li>3. Apply knowledge of GI pathophysiology to the diagnosis and treatment of disease</li> </ol> <p><b><u>TEACHING METHODOLOGIES</u></b></p> <ol style="list-style-type: none"> <li>1. Attendance and participation at daily inpatient rounds.</li> <li>2. Participation in patient care as supervised by the attending physician, fellow, and medicine residents on the service.</li> <li>3. Work up a minimum of 2 new patients and follow a minimum of 3 patients on the service each week.</li> <li>4. Attend regularly scheduled GI conferences (GI Grand Rounds, Fellow Case Conference, GI Luminal Pathology Conference, GI Research and Pancreas-Biliary Conference, GI Tumor Board, etc.)</li> <li>5. Observe GI procedures (colonoscopy, EGD, ERCP, small bowel endocapsule, motility studies, etc.)</li> <li>6. <b><u>Students will stay until nine pm three times during the rotation in order to understand after hours activities that happen on the service.</u></b></li> </ol> <p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Inflammatory bowel disease (Crohn's disease and Ulcerative Colitis)</li> <li>2. Biliary – pancreas disorders</li> <li>3. Abdominal pain</li> <li>4. Gastrointestinal bleeding</li> <li>5. Functional gastrointestinal disorder</li> </ol>
<p><b>Pulmonary Medicine Clinics</b></p>	<p><b><u>PATIENT CARE</u></b></p> <ol style="list-style-type: none"> <li>1. Demonstrate proper techniques for interviewing a patient to obtain a medical history and performing a physical examination in the outpatient setting.</li> <li>2. Demonstrate analysis, synthesis, and integration of pertinent patient data.</li> <li>3. Formulate a comprehensive, ordered differential diagnosis.</li> <li>4. Present patient data gathered from patient interviews, physical examinations, and laboratory sources in standardized format.</li> <li>5. Perform diagnostic and lab test interpretation skills commonly used in Pulmonary Medicine (e.g. interpret chest radiographs and pulmonary function tests).</li> </ol> <p><b><u>MEDICAL KNOWLEDGE</u></b></p> <ol style="list-style-type: none"> <li>1. Apply knowledge of the pathophysiology, epidemiology, and natural history of diseases to the diagnosis and management of common patient conditions in Pulmonary Medicine.</li> </ol> <p><b><u>TEACHING METHODOLOGIES AND ROTATION ACTIVITIES</u></b></p> <p>Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:</p> <ol style="list-style-type: none"> <li>1. Students will participate in their choice of Pulmonary Specialty Clinics and evaluate clinic patients under attending supervision.</li> <li>2. Presentation and discussion of patients with the clinic attending.</li> <li>3. Selected reading material on topics pertinent to the pulmonary clinics.</li> <li>4. Attendance at Pulmonary Clinical Conferences at noon on Mondays and Fridays.</li> </ol>

	<p>5. Brief (15 minute) presentation to pulmonary faculty and fellows on a topic in pulmonary medicine, to be done at the end of the rotation.</p> <p>6. Schedule: Monday, Tuesday, Thursday, Friday will be spent in clinics. Wednesday is a reading day.</p> <p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Cystic fibrosis</li> <li>2. Sarcoidosis</li> <li>3. Pulmonary hypertension</li> <li>4. Interstitial lung disease</li> <li>5. Lung cancer</li> </ol>
<p><b>Pulmonary Medicine Inpatient Service</b></p>	<p><b><u>PATIENT CARE</u></b></p> <ol style="list-style-type: none"> <li>1. Demonstrate proper techniques for interviewing a patient to obtain a medical history and performing a physical examination in the inpatient setting.</li> <li>2. Demonstrate analysis, synthesis, and integration of pertinent patient data.</li> <li>3. Formulate a comprehensive, ordered differential diagnosis.</li> <li>4. Present patient data gathered from patient interviews, physical examinations, and laboratory sources, including progress notes on patients, in standardized format.</li> <li>5. Document patient data gathered from patient interviews, physical examinations, and laboratory sources, including progress notes on patients, in standardized format.</li> <li>6. Perform diagnostic and lab test interpretation skills commonly used in Pulmonary Medicine (e.g. interpret chest radiographs and pulmonary function tests).</li> </ol> <p><b><u>MEDICAL KNOWLEDGE</u></b></p> <ol style="list-style-type: none"> <li>1. Apply knowledge of the pathophysiology, epidemiology, and natural history of diseases to the diagnosis and management of common patient conditions in Pulmonary Medicine.</li> <li>2. Demonstrate effective and professional interpersonal and communication skills in interactions with patients, including an awareness of psychosocial factors related to patients' problems.</li> </ol> <p><b><u>TEACHING METHODOLOGIES AND ROTATION ACTIVITIES</u></b></p> <p>Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:</p> <ol style="list-style-type: none"> <li>1. Attendance at in-hospital rounds services and other clinical activities.</li> <li>2. Participation in patient care as supervised by the attending and residents on the service, including work up of a minimum of 2 new patients and following a minimum of 3 patients on the service each week.</li> <li>3. Didactic lectures given by pulmonary attending, pulmonary fellow, internal medicine resident and interns.</li> <li>4. Attendance at Pulmonary Clinical Conferences at noon on Mondays and Fridays.</li> <li>5. Attendance at Internal Medicine noon conferences Tuesday-Thursday.</li> <li>6. <b><u>Students will stay until nine pm three times during the rotation in order to understand after hours activities that happen on the service.</u></b></li> </ol> <p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Cystic fibrosis</li> <li>2. Pulmonary hypertension</li> <li>3. COPD</li> <li>4. Asthma</li> <li>5. Sarcoidosis</li> <li>6. Interstitial lung diseases</li> <li>7. Lung masses/nodules</li> <li>8. Bronchiectasis</li> <li>9. Pneumonia</li> </ol>
<p><b>Inpatient Oncology</b></p>	<p><b><u>PATIENT CARE</u></b></p> <ol style="list-style-type: none"> <li>1. Demonstrate proper techniques for interviewing a patient to obtain an oncology-focused medical history and performing an oncology-focused physical examination in the inpatient setting.</li> <li>2. Demonstrate analysis, synthesis, and integration of pertinent patient data.</li> </ol>

3. Formulate a comprehensive, ordered differential diagnosis.
4. Present and document patient data gathered from patient interviews, physical examinations, and laboratory sources in standardized format.
5. Perform diagnostic and lab test interpretation skills commonly used in the inpatient oncology setting.
6. Identify basic concepts of oncologic preventive health care, including patient education and appropriate age/sex/race-specific screening recommendations.

**MEDICAL KNOWLEDGE**

1. Apply knowledge of the pathophysiology, epidemiology, and natural history of diseases to the diagnosis and management of common patient conditions in oncology.

**TEACHING METHODOLOGIES AND ROTATION ACTIVITIES**

Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:

1. Participation in inpatient activities of the MUH Oncology Service.
2. The student will see and follow patients assigned by the supervising attending physician and/or fellow and/or resident and present their findings and interpretations to the supervising physicians.
3. The student also will participate in all of the Division's standing educational conferences.

**4. Students will stay until nine pm three times during the rotation in order to understand after hours activities that happen on the service.**

**KEY DIAGNOSES**

1. Breast Cancer
2. Colon Cancer
3. Head and Neck Cancer
4. Constipation
5. Pain 2/2 Cancer

**Hepatology**

**PATIENT CARE**

1. Demonstrate proficiency in assessing patients with liver disease and understanding the components of the history and physical exam that are essential for managing these patients.
2. Gain an appreciation for timing of referral for liver transplant evaluation by assessing severity of liver disease and short term prognosis in patients with cirrhosis.
3. Observe the comprehensive evaluation required of patients undergoing consideration for liver transplantation and the selection process that occurs in determining a patients' potential candidacy.

**MEDICAL KNOWLEDGE**

1. Understand the pathophysiology and management of complications that result from cirrhosis and portal hypertension, i.e. Variceal Bleeding, Encephalopathy, Ascites, Spontaneous Bacterial Peritonitis, Hepatopulmonary Syndrome, Portopulmonary Hypertension, Hepatorenal Syndrome, and Hepatocellular Carcinoma.
2. Become familiar with immunosuppressive agents post-transplant, including their mechanism of action, common side effects, and toxicities.

**TEACHING METHODOLOGIES AND ROTATION ACTIVITIES**

Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:

1. Students will participate in the General Hepatology Clinics and Liver Transplant Clinics under the Attending supervision. In each clinic, students will be specifically responsible for assessing and formulating a management plan for the patients seen as an Initial Clinic Visit (ICV) in the respective clinics. Additionally, students will evaluate interesting patients seen in follow up in the clinics who require continued management of their liver disease.
2. Students will round with the Liver Attending on the inpatient Liver Service and hospital Liver Consults a minimum of 1 day per week.
3. Students will observe outpatient endoscopy, to learn the management of patients with esophageal varices, including prophylactic band ligation. If available, students will also observe the inpatient endoscopic management of acute upper GI portal hypertension bleeding.
4. Students will attend the following Hepatology Sectional didactic conferences: Monday

afternoon GI Fellows' Teaching Conference, Tuesday afternoon Liver Biopsy Conference, Wednesday morning Liver Transplant Selection Committee Meeting, and Wednesday afternoon Liver Tumor Board.

5. Time permitting; students will observe a liver transplantation under the supervision of the transplant surgeons.

6. Students will receive didactic teaching on the following topics:

- a. Initial outpatient evaluation of patients with Cirrhosis
- b. Pathophysiology and management of Ascites: including diagnostic and large volume paracentesis.
- c. Management of Esophageal and Gastric Varices, including primary prophylaxis, treatment for acute variceal bleeding, and secondary prophylaxis for bleeding varices.
- d. Pulmonary vascular complications of Cirrhosis.
- e. Viral Hepatitis, specifically the guidelines for treatment of chronic Hepatitis B and C.

**7. Students will stay until nine pm three times during the rotation in order to understand after hours activities that happen on the service.**

#### **PATIENT ENCOUNTERS**

1. Ascites
2. Esophageal Varices
3. Hepatic Encephalopathy
4. Spontaneous Bacterial Peritonitis
5. Post-Liver Transplant
6. Hepatitis C
7. Alcoholic Liver Disease

#### **General Internal Med Ambulatory Experience**

#### **PATIENT CARE**

1. Demonstrate proper techniques for interviewing a patient to obtain a medical history and performing a physical examination in the ambulatory clinical setting.
2. Demonstrate analysis, synthesis, and integration of pertinent patient data.
3. Formulate a comprehensive, ordered differential diagnosis.
4. Present and document patient data gathered from patient interviews, physical examinations, and laboratory sources in standardized format.
5. Perform diagnostic and lab test interpretation skills commonly used in outpatient Internal Medicine settings.

#### **MEDICAL KNOWLEDGE**

1. Apply knowledge of the pathophysiology, epidemiology, and natural history of diseases to the diagnosis and management of common patient conditions in Internal Medicine.
2. Demonstrate effective and professional interpersonal and communication skills in interactions with patients, including an awareness of psychosocial factors related to patients' problems.
3. Identify issues related to the cost-effectiveness of diagnostic evaluations and patient care.
4. Identify basic concepts of preventive health care, including patient education, immunization, and appropriate age-specific screening recommendations.

#### **TEACHING METHODOLOGIES AND ROTATION ACTIVITIES**

Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:

1. Participation in ambulatory clinic activities in a variety of local locations.
2. Participation in patient care as supervised by the attending and residents in clinics, including work up of a minimum of 1 new patient per ½ day clinic session.

#### **KEY DIAGNOSES**

1. Hypertension
2. Congestive Heart Failure
3. Hypothyroidism
4. COPD
5. Diabetes
6. Hypercholesterolemia

	7. Tobacco Dependence
<b>Subspecialty Consults/Clinics</b>	<p><b><u>TEACHING METHODOLOGIES AND ROTATION ACTIVITIES</u></b></p> <p>Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:</p> <ol style="list-style-type: none"> <li>1. Attendance at in-hospital rounds, clinics, and other clinical activities.</li> <li>2. Participation in patient care as supervised by the attending and residents on the service, including work up of a minimum of 2 new patients and following a minimum of 3 patients on the service each week.</li> <li>3. Attendance at noon conferences and/or any conference supplied by the division.</li> </ol> <p>Students will be assigned to one of the following areas of Internal Medicine. They will be in clinic or on consults (or a combination of the two) based upon the area. For further information on the specific area, email Mary Ann Snell (snellma@muscc.edu).</p> <ol style="list-style-type: none"> <li>1. Cardiology</li> <li>2. Endocrinology</li> <li>3. Gastroenterology</li> <li>4. General Internal Medicine</li> <li>5. Hematology/Oncology</li> <li>6. Infection Disease</li> <li>7. Nephrology</li> <li>8. Pulmonary</li> <li>9. Rheumatology</li> </ol>
<b>Cardiology Outpatient Clinic</b>	<p><b><u>PATIENT CARE</u></b></p> <p>At the completion of this clinical rotation, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Take a good cardiac history and understand cardiac risk factors.</li> <li>2. Perform a complete cardiovascular examination.</li> </ol> <p><b><u>MEDICAL KNOWLEDGE</u></b></p> <ol style="list-style-type: none"> <li>1. At the completion of this clinical rotation, students will be able to:</li> <li>2. Use EKGs, ECHO and stress testing appropriately – in working up cardiac disorders.</li> <li>3. Get familiar and comfortable with basic cardiac oral medications.</li> </ol> <p><b><u>TEACHING METHODOLOGIES AND ROTATION ACTIVITIES</u></b></p> <p>Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:</p> <ol style="list-style-type: none"> <li>1. Students will evaluate Clinic patients under Attending supervision. They will take a detailed history of new patients. Cardiovascular examination skills will be imparted to the students at the bedside. Return visit patients will be followed along with the attending. Any interesting findings or EKGs will be brought to their attention.</li> <li>2. Students will assist the nurses in obtaining vitals thereby learning how to assess pulse, BP, respiration and temperature.</li> <li>3. Students will also assist with performing an EKG and in its interpretation on their own patients</li> <li>4. Students will accompany and observe Echocardiography and Exercise stress testing on their patients. They will also learn how to hook up Holter and Event Monitors.</li> <li>5. Students will attend some morning reports. They will also be expected to attend all cardiology AM conferences during the rotation. After the morning conferences they will report to their clinic.</li> <li>6. They will participate in patient counseling and advising patients about risk factor modifications.</li> <li>7. This rotation is very self-directed and requires students to be self-directed in their learning.</li> <li>8. Students are encouraged to attend stress tests, do EKGs, read basic echo and nuclear scans with fellows as well as go to the catheterization lab.</li> </ol> <p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Coronary Artery disease</li> <li>2. Congestive Heart Failure</li> <li>3. Arrhythmia</li> <li>4. Valvular heart disease</li> <li>5 Risk Factor Modification- (DM, HTN, Hyperlipidemia, Smoking)</li> </ol>

**Electrocardiography  
(EKG)**

**MEDICAL KNOWLEDGE**

At the completion of this clinical rotation, students will be able to:

1. Position leads and do an EKG
2. Appreciate waves and intervals on an EKG
3. Appreciate basics rhythms on EKG and have a general idea about treating common rhythm disorders
4. Identify ST segment alterations on an EKG and know the differential diagnosis for the abnormality.
5. Know the basic treatments for ST segment elevation MI (STEMI) and non ST segment elevation MI (NSTEMI)

**TEACHING METHODOLOGIES AND ROTATION ACTIVITIES**

Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:

1. Students will do a few elective EKGs daily with the technician. They will position leads appropriately and do EKGs and troubleshoot the EKG machine.
2. Students will be taught to identify EKG waves and intervals. They will participate in the EKG readings at the site they are allotted. They will be supervised by the attendings, fellows and residents at both sites.
3. EKG didactic teaching will be done 1 day/ week at each site. They will be advised about self learning EKG modules.
4. Students will attend morning report and (if time permits) show and briefly highlight 1-2 interesting EKGs at the morning report. They will also be expected to attend all cardiology AM conferences during the rotation.
5. They will attend the VA cardiology clinic on Tuesdays (half day) and evaluate patients and their EKGs in an ambulatory setting. They will attend one half day clinic per week at MUSC in RT-6 cardiology clinic.
6. They will participate in elective cardioversions with the fellow and attending.
7. They will learn the management of acute coronary syndromes based on the EKG.
8. They will learn about the basic pharmacology and applications of Adenosine, Dioxin, beta blockers, calcium channel blockers and Class 1-4 Antiarrhythmic drugs.
9. This rotation is very self-directed and requires students to be self-directed in their learning.

**KEY DIAGNOSES**

1. STEMI
2. NSTEMI
3. Atrial Fibrillation / Atrial Flutter
4. Other arrhythmias

**Diabetology**

**PATIENT CARE**

1. Take and present diabetes-focused histories and physical exams regarding.
2. Learn the importance and roles of different providers in multidisciplinary approach to diabetes care (podiatry, diabetes educators, dietary, etc.)

**MEDICAL KNOWLEDGE**

1. To understand basic classification of diabetes: Type 1, Type 2, Latent autoimmune adult onset, gestational, etc.
2. Understand pharmacology and use of oral diabetic medicines and insulin.
3. Understand the essentials of intensive insulin therapy, including insulin pump therapy and glycemic monitoring (fingerstick blood sugars, A1c, fructosamine).
4. Understand and assess for common diabetes complications: microvascular, macrovascular and hypoglycemia.
5. Understand rationale and methodology of inpatient glycemic control.

**TEACHING METHODOLOGIES AND ROTATION ACTIVITIES**

1. Rotate with Diabetes Management Service (DMS) and assist in assessing patients and participate in DMS rounds.
2. Participate in endocrine attending IDEAL clinics, including interactions with diabetic educators and dietician.
3. Under attending supervision, participate in private endocrine clinics and assist in the assessment of patients with diabetes
4. Attend endocrine conferences (grand rounds, research conference and Journal club).
5. Students may tailor the consult/clinic ratio to their liking.

	<p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Type 1 diabetes</li> <li>2. Type 2 diabetes</li> </ol>
<p><b>Endocrinology Neoplasia</b></p>	<p><b><u>PATIENT CARE</u></b></p> <ol style="list-style-type: none"> <li>1. Take and present endocrine-focused histories and physical exams regarding above disorders. Special focus given to learning proficiency in exam of thyroid.</li> </ol> <p><b><u>MEDICAL KNOWLEDGE</u></b></p> <ol style="list-style-type: none"> <li>1. Know and understand pathophysiology of common neoplastic disorders of the endocrine system (i.e. thyroid cancer, including post-surgical hypothyroidism and hypoparathyroidism and benign thyroid nodules; pituitary tumors and pituitary hypersecretory and deficiency syndromes; hyperparathyroidism; MEN syndromes).</li> <li>2. Learn and discuss the basics of treatment and prognosis for more common endocrine tumors</li> <li>3. Learn the appropriate use and interpretation diagnostic technologies commonly used in the care of patients with endocrine tumors: thyroid ultrasound, thyroid scan and uptake ("hot" and "cold" nodules), 131-iodine whole body scans and therapy for thyroid cancer; CT and MRI imaging of adrenals and pituitary; nuclear imaging for pheochromocytoma and other endocrine tumors.</li> </ol> <p><b><u>TEACHING METHODOLOGIES AND ROTATION ACTIVITIES</u></b></p> <p>Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:</p> <ol style="list-style-type: none"> <li>1. Students will participate in Endocrine Tumor Clinic.</li> <li>2. Students will participate in Thyroid clinic.</li> <li>3. Students will observe Thyroid biopsies.</li> <li>4. With supervision of inpatient endocrine fellow and attending, follow inpatients with endocrine neoplasia as primary consult diagnosis.</li> <li>5. Attend endocrine conferences (grand rounds, research conference and Journal club).</li> </ol> <p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Thyroid cancer</li> <li>2. Nodular thyroid cancer, without established diagnosis of thyroid cancer</li> <li>3. Hyperparathyroidism</li> <li>4. Adrenal nodule/cancer</li> <li>5. Pituitary tumor</li> </ol>
<p><b>Inpatient Cardiology</b></p>	<p><b><u>PATIENT CARE</u></b></p> <ol style="list-style-type: none"> <li>1. Take a good cardiac history, understand and modify cardiac risk factors, complete cardiovascular system examination, get comfortable with work-up of patients admitted with cardiovascular diagnosis, get familiar and comfortable with cardiac medications.</li> <li>2. Present new cases confidently, follow-up cases allotted and learn to work efficiently as a team member.</li> <li>3. Develop skills in patient and family interaction.</li> </ol> <p><b><u>MEDICAL KNOWLEDGE</u></b></p> <ol style="list-style-type: none"> <li>1. Understand the use of lab tests, EKGs, ECHO, stress testing and cardiac invasive procedures in working up cardiac disorders.</li> <li>2. Improve EKG interpretation skills</li> <li>3. Understand basic cardiac, coronary and electrophysiological anatomy.</li> <li>4. Understand basic cardiac hemodynamics.</li> </ol> <p><b><u>TEACHING METHODOLOGIES AND ROTATION ACTIVITIES</u></b></p> <p>Students on this rotation will be expected to learn and achieve the educational goals and objectives through the following methodologies and activities:</p> <ol style="list-style-type: none"> <li>1. Students will evaluate inpatients under Attending or Resident/ Fellow supervision. They will take and record a detailed history and physical of new patients. Cardiovascular examination skills will be imparted to the students at the bedside. They will practice case presentations with the intern and resident prior to presenting to the attendings on morning rounds. Any interesting findings or EKGs will be brought to their attention.</li> <li>2. Students will obtain vitals (pulse, BP, respiration and temperature) and also learn how to do and interpret an EKG on their patients.</li> </ol>

	<p>3. Students will accompany their patients and observe Echocardiography and Exercise stress testing, cardiac catheterization /EP on their patients. They will also learn how to hook up Holter and Event Monitors. They will also review Telemetry records daily and get confident with rhythm assessment.</p> <p>4. Students will attend morning report and (if time permits) briefly present an interesting inpatient case at the morning report. They will also be expected to attend all cardiology AM conferences during the rotation. After the morning conferences they will report to their resident.</p> <p>5. They will participate in patient counseling and advise about risk factor modifications. They will participate with assessment of patients other social needs with the social workers and discharge planners.</p> <p>6. <b><u>Students will stay until nine pm three times during the rotation in order to understand after hours activities that happen on the service.</u></b></p> <p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Coronary Artery disease</li> <li>2. Congestive Heart Failure</li> <li>3. Arrhythmia</li> <li>4. Valvular heart disease</li> <li>5. Risk Factor Modification- (DM, HTN, Hyperlipidemia, Smoking)</li> </ol>
<p><b>Inpatient Hematology</b></p>	<p><b><u>PATIENT CARE</u></b></p> <ol style="list-style-type: none"> <li>1. Demonstrate proper techniques across for interviewing a patient to obtain a hematology-focused medical history and performing a hematology-focused physical examination in the inpatient setting.</li> <li>2. Demonstrate an understanding, through presentations on daily rounds, of the patient's primary disease process, how complications relate to causative factors, and how diagnostic test results should be interpreted and applied to the decision-making process.</li> </ol> <p><b><u>MEDICAL KNOWLEDGE</u></b></p> <ol style="list-style-type: none"> <li>1. Understand the standard approach for obtaining a bone marrow aspirate and biopsy and a peripheral blood smear, assessing their adequacy, and interpreting the specimens, including distinguishing normal from abnormal erythrocytes, leukocytes, and platelets.</li> </ol> <p><b><u>TEACHING METHODOLOGIES AND ROTATION ACTIVITIES</u></b></p> <ol style="list-style-type: none"> <li>1. Participation in the full range of inpatient activities of the MUH Hematology Service.</li> <li>2. The student will (A) perform the admission work-up of new patients assigned him by the supervising attending physician and/or fellow and/or resident; (B) continue on a daily basis to evaluate his assigned patients (through follow-on histories and physicals on a daily basis (or more often as appropriate) plus reviewing all diagnostic testing results); (C) present on a daily basis his findings and interpretations on his new and follow-up patients to the supervising physicians on rounds; (D) perform all appropriate written documentation on his assigned patients including filling out admission H&amp;P forms, writing daily progress notes in the standard SOAP format, and writing orders and filling out associated test requisition forms (for co-signature by a supervising physician in accordance with hospital policy); and (E) perform necessary procedures suitable for his level of skill such as bone marrow aspirations and biopsies and lumbar punctures on his assigned patients under the supervision of the supervising physicians within the limits specified by hospital policy (e.g., a student may perform a lumbar puncture, but only a hematology/oncology fellow or attending may administer intrathecal chemotherapy after the student has obtained the initial fluid samples).</li> <li>3. The student also will participate in all of the Division's standing educational conferences.</li> <li>4. <b><u>Students will stay until nine pm three times during the rotation in order to understand after hours activities that happen on the service.</u></b></li> </ol> <p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Leukemia – ALL and AML</li> </ol>

	<ol style="list-style-type: none"> <li>2. Lymphoma – B cell and T cell</li> <li>3. Neutropenic fever</li> </ol>
<b>Heme/Coagulation Disorders</b>	<p><b><u>PATIENT CARE</u></b></p> <ol style="list-style-type: none"> <li>1. Provide safe and effective anti-thrombotic therapy using heparin, low molecular weight heparin, warfarin, dabigatran and direct thrombin inhibitors</li> <li>2. Diagnose and treat common thrombotic disorders</li> </ol> <p><b><u>MEDICAL KNOWLEDGE</u></b></p> <ol style="list-style-type: none"> <li>1. Learn to use the AHA guidelines for anti-thrombotic therapy.</li> <li>2. Diagnose and treat common congenital and acquired bleeding disorders. including DVT and arterial thrombosis.</li> <li>3. Use peripheral blood smears and clinical laboratory tests to diagnose common disorders of red blood cells, platelets and white blood cells.</li> </ol> <p><b><u>TEACHING METHODOLOGIES AND ROTATION ACTIVITIES</u></b></p> <ol style="list-style-type: none"> <li>1. Attend 2 half-day clinics and complete outpatient evaluation of one new patient and one follow-up patient each clinic.</li> <li>2. Make afternoon rounds with clinical Coagulation Consult service. Perform at least 3 new consult evaluations per week and 5 follow-up evaluations of patients referred to this service.</li> <li>3. Attend weekly coagulation consult service. Complete one case presentation and one evidence-based approach to diagnosis and treatment of a patient case seen every two weeks.</li> <li>4. Attend monthly coagulation/pharmacy rounds.</li> <li>5. Conduct evidence- and web-based literature search on select case management issues.</li> <li>6. Use web-based teaching files to enhance learning.</li> </ol> <p><b><u>PATIENT ENCOUNTERS</u></b></p> <p>Students on this rotation will be expected to work up and/or follow the following minimum number of patients with the specified conditions (i.e, 2 pediatric ear infections, 2 adult migraine headaches):</p> <ol style="list-style-type: none"> <li>1. 2 new and 2 return outpatient evaluations each week</li> <li>2. 3 new inpatient evaluations per week.</li> <li>3. 5 follow-up evaluations of inpatient consults per week.</li> <li>4. Pre- and post-rotation online quiz will assist in identifying areas that are well understood and those that could improve with further study.</li> </ol> <p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Deep Vein Thrombosis</li> <li>2. Hypercoagulable states</li> <li>3. Coagulopathies</li> </ol>
<b>Nephrology Consultation</b>	<p><b><u>MEDICAL KNOWLEDGE</u></b></p> <p>At the end of rotation, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Create differential diagnosis in patients with acute renal failure.</li> <li>2. Decide when to initiate dialysis.</li> <li>3. Learn the advantages of intermittent hemodialysis versus continuous renal replacement for acute renal failure.</li> <li>4. Evaluate and treat acid-base disorders.</li> <li>5. Evaluate and treat electrolyte disorders (sodium, potassium).</li> </ol> <p><b><u>TEACHING METHODOLOGIES AND ROTATION ACTIVITIES</u></b></p> <p>Performing consultations by: reviewing charts, obtaining medical history, performing physical examination, reviewing laboratory data, discussing gathered material with fellow and attending, and writing up consult report.</p> <p><b><u>KEY DIAGNOSES</u></b></p> <ol style="list-style-type: none"> <li>1. Acute renal failure</li> <li>2. Acid-base derangements</li> <li>3. Hyponatremia</li> <li>4. Hypokalemia</li> <li>5. Hyperkalemia</li> </ol>
<b>Nephrology Ambulatory</b>	<p><b><u>MEDICAL KNOWLEDGE</u></b></p> <ol style="list-style-type: none"> <li>1. Identify diabetic glomerulosclerosis and other glomerular diseases.</li> </ol>

**Experience**

2. Learn treatment options to slow chronic kidney disease.
3. Learn treatment options for hypertension.
4. Learn when to initiate chronic dialysis.
5. Learn modality options for chronic dialysis.
6. Learn chronic kidney disease complications: anemia, osteodystrophy.
7. Learn who can be transplanted; and approaches to allograft failure.

**TEACHING METHODOLOGIES AND ROTATION ACTIVITIES**

1. Observe patients with attending in clinic. Students are in clinic 4 days a week with a reading day on Fridays.
2. Work up patients and present them to fellows and/or attendings

**KEY DIAGNOSES**

1. Diabetic nephropathy
2. Hypertensive nephrosclerosis
3. Chronic hyperkalemia
4. Renal tubular acidosis
5. Lupus nephritis
6. Renal cystic disease
7. Renovascular disease
8. Renal transplantation

**PROFESSIONALISM**

Students should exhibit professional and ethical behavior at all times. Among other things, this includes appropriate dress, demeanor, attendance, promptness, and appropriate interactions with health care providers.

**DRESS CODE**

You are expected to dress professionally. Patients will recognize you as a concerned member of the medical team, and will expect (and deserve) appropriate attire on your part. Attendings and residents reserve the right to comment on the appropriateness of dress. Name tags must be worn at all times.

**ATTENDANCE**

1. We adhere to the MUSC College of Medicine 3<sup>rd</sup> Year Student Absence Policy. See link on the IM Student Website Welcome page for details.
2. No make-up necessary for up to 1 day: death, illness (MD note), wedding (immediate family). Any other absences, must be made up in a timely manner.
3. You have a daily commitment to be on work rounds led by the team resident/attending physician. You must receive **prior** approval from Dr. DeWaay, your course director, in order to be absent from rounds. For absences that are requested in advance, an absence form must be filled out and emailed to Mary Ann Snell.
4. For emergency situations (illness, death in family etc), an email needs to be sent to Dr. DeWaay ([dewaay@musc.edu](mailto:dewaay@musc.edu)) and the coordinator ([snellma@musc.edu](mailto:snellma@musc.edu)) for any absence. Once that approval has been received it will then be your responsibility to let your team know you will be gone. A student schedule is included in this syllabus. We follow the MUSC College of Medicine Absence and Away Policy (please see website link for details).
5. *Attendance at all scheduled student activities* as delineated by the specific selective is required.

**ONLINE CURRICULUM:** There are a series of cases that have been developed from all of the subspecialties of internal medicine. These cases can be found on Moodle entitled "Selective Curriculum".

All of these cases must be completed by the end of the rotation. If these cases are not completed, the student's grade will be withheld until they are completed.

### **INTERPROFESSIONAL ACTIVITY:**

There is no formal, prearranged interprofessional activity for these courses. However, you will be exposed to case managers, PharmDs, PT, OT and many other types of medical professionals. Feel free to create your own activity that would satisfy your requirement. Activity cards can be obtained on Moodle or from Mary Ann Snell. Cards need to be returned to the Dean's Office.

### **GRADING POLICY**

1. Medicine Selectives are graded on a Pass-Fail basis. Your attending physician, the fellow and/or resident assigned to your team will evaluate your clinical performance.
2. Criteria for Passing:
  - a. Clinical Evaluations: must obtain a minimum average of 9 "Frequently" marks.
  - b. A passing grade may be reviewed and potentially withheld if the student obtains any "Rarely, if ever" marks on any evaluation, has more than 4 marks of "Inconsistently" on any given evaluation or has any professionalism issues raised by on their evaluations as indicated by a "Yes" being checked on questions 19-23.
3. In order to receive a grade in the selective courses the online cases must be completed. If the student does not complete these cases, their grade will marked "Incomplete" until they do.
4. Appeals regarding the final grade must be directed to the Evaluation Committee through the Clerkship Director or the Chairman of the Evaluation Committee. The standing policy of the committee is to make no changes in the final grade without substantial new information to justify such a change. Thus any difficulties which a student has during his or her rotation should be brought to the attention of the core directors prior to determination of grades. If the matter is not resolved to the satisfaction of the student and the student continues to feel that a wrong has occurred, the student may petition in writing the Dean of his/her college. The Dean, in turn, may ask the academic department involved to form an ad hoc committee to determine a final grade, which, if accepted by the Dean, is considered final.

### **COURSE EVALUATION**

In order to continue to improve the Internal Medicine Selectives, you will be required to critique the Selective using the E-value system. You will also be required to critique the attendings, residents, and fellows with whom you worked. These comments are totally anonymous, held in the strictest confidence, and are **never** seen by the attendings, residents, or fellows. Issues critically important to the function of the Department are shared with the chairman. **These evaluations need to be completed no later than one week after the completion of the rotation.**

### **MEDICINE SELECTIVE CONTACTS**

Most of the time you will meet with the division coordinator immediately following orientation. S/he will answer any questions you might have and may supply you with some additional information. At that time they will put you in touch with your team members.

<u>Subspecialty:</u>	<u>Contact:</u>	<u>Phone:</u>	<u>Location:</u>
<b>Cardiology:</b>	Paulette Okurowski	876-4807	7 <sup>th</sup> Fl. ART
MED 894 J	Subspecialty C/C/C	Dr. Valerian Fernandes	
MED 896 J	Cardiology Clinics	Dr. Valerian Fernandes	
MED 897 J	EKG	Dr. Valerian Fernandes	
MED 900 J	Cardiology Wards	Dr. Valerian Fernandes	
<b>Endocrinology:</b>	Beth Gunnells	792-4747	816 CSB
MED 894 J	Subspecialty C/C/C	Dr. Beatrice Hull	
MED 898 J	Diabetology	Dr. Beatrice Hull	
MED 899 J	Endocrine Neoplasia	Dr. Beatrice Hull	
<b>Gastroenterology:</b>	Sherry Bailey Dallas Ellis	876-4699 876-4698	7 <sup>th</sup> Fl. ART
MED 858 J	GI	Dr. Larry Comerford	
MED 891 J	Hepatology	Dr. David Koch	
MED 894 J	Subspecialty C/C/C	Drs. Larry Comerford & David Koch	
<b>Hem/Onc:</b>	Deena Kroeck Nicole Confarotta	792-6668 792-8584	903 CSB
MED 823J	Heme/Coagulation Disorders	Dr. Charles Greenberg	
MED 890 J	Oncology Wards	Dr. Larry Afrin	
MED 894 J	Subspecialty C/C/C	Dr. Larry Afrin	
MED 901 J	Hematology Wards	Dr. Larry Afrin	
<b>Infectious Disease:</b>	Shawn Prioleau Donna Gerke	792-4542 792-1211	12 <sup>th</sup> Fl. RT
MED 894 J	Subspecialty C/C/C	Dr. Preston Church	
<b>Nephrology:</b>	Tammy Hill	792-9188	829 CSB
MED 894 J	Subspecialty C/C/C	Dr. Rachel Sturdivant	
MED 995 J	Nephrology Clinics	Dr. Rachel Sturdivant	
MED 996 J	Nephrology Consults	Dr. Rachel Sturdivant	
<b>Pulmonary:</b>	Marianne Grac	792-7199	812 CSB
MED 873 J	Pulmonary Clinics	Dr. Patrick Flume	
MED 881 J	Pulmonary Wards	Dr. Patrick Flume	
MED 894 J	Subspecialty C/C/C	Dr. Patrick Flume	

**Rheumatology:** Terri Hayes 792-3484 912 CSB  
MED 894 J Subspecialty C/C/C Drs. Faye Hant & Diane Kamen

## **PROBLEMS**

If you have any questions or problems during your rotation, please call the student coordinator at 792-7282 (807 E CSB). If you have any problems on the service during the rotation, please contact the student coordinator, or course director. If you would like to meet with the course director during or after the rotation, you may schedule an appointment by contacting your student coordinator.

Associate Vice Chair for Medical Education for the Dept of Internal Medicine:  
Deborah DeWaay, M.D., [dewaay@musc.edu](mailto:dewaay@musc.edu) Pager #14523

Chairman, Evaluation Committee  
Edwin A. Smith, M.D.

## **CODE OF CONDUCT**

MUSC and the College of Medicine are invested in maintaining an academic and clinical environment in which students, faculty, fellows, residents, nurses and staff can work together freely without threat of mistreatment or bias with regard to their race, color, religion, sex, sexual orientation, national or ethnic origin, age, disability or any other factor irrelevant to participation in the activities of the College. Students are responsible for reading and understanding the Code of Conduct Policy.

[https://www.musc.edu/medcenter/policy/stds\\_of\\_conduct.pdf](https://www.musc.edu/medcenter/policy/stds_of_conduct.pdf)