INTERNAL MEDICINE CLINICAL ROTATION
COMPETENCY BASED CURRICULUM
During the third year of the curriculum, students expand their knowledge of the biomedical conditions, pathology and medical conditions commonly seen in adult medicine and learn to use knowledge, inductive and deductive reasoning and problem solving skills to evaluative the patient and improve their health and wellness in a clinical setting.

The curriculum is taught through assigned readings, on-line case modules and presentations, clinical case presentations and lectures at the clinical sites, tumor boards, grand rounds, and through the one-on-one student-preceptor experience in caring for patients in the clinical setting. Students are expected to complete the assigned reading, educational presentations, cases and modules throughout the month as well as conduct scholarly research of the literature concerning clinical patients and presentations cases that present in the office or hospital.

The Core Internal Medicine Competencies that are to be gained in the third year include but are not limited to:

KNOWLEDGE
I. The student’s knowledge base upon completion of the rotation should be measured by his or her ability to demonstrate the following:

A. Demonstrate the ability to different normal from abnormal physiology, behavior, function and structure in the patient.
B. Identifying the pathophysiologic mechanisms of common adult illnesses.
C. Relate the pathophysiologic mechanisms of diseases to the clinical signs & symptoms of the patient and the sequel of the disease process.
D. Describing the key diagnostic processes for the most common adult medical disorders.
E. Performing a comprehensive clinical history and physical examination to establish the diagnosis and severity of disease.
F. Generate a differential diagnosis list of the most likely causes of a patient’s symptoms and clinical findings.
G. Develop an evaluation and treatment plan based on scientific evidence and proven outcomes to benefit the patient.
H. Demonstrate the ability to work collaboratively and cooperatively in a team environment for the benefit of the patient. Identify the contribution of each team member of the health care team in the care of patients.

I. Communication
The student will demonstrate the ability to perform a comprehensive medical interview and obtain medical and historical information that is pertinent to the patient.

A. Signs and symptoms related to the patient condition and presentation: including intensity, location, radiation, frequency, duration, onset, alleviating factors, aggravating factors, setting, associated symptoms, functional impairment, and the patient’s interpretation.

B. Past medical and surgical history that is significant to the patient’s condition: includes past childhood and adult illness, chronic medical conditions, source of access to health care, previous trauma or surgical procedures and the age when the illness or surgery took place.

C. Family history of chronic or inheritable disease process and risk factors

D. Social history includes: family and support systems, sexual history, and the use of tobacco, illicit drugs, or alcohol.

E. Occupational history

F. Psychiatric or behavioral conditions

G. Allergies, all current medications (OTC, alternative, Natural or Herbal and prescribed), and transfusions

H. The student must demonstrate appropriate sensitivity for cultural, ethnic, religious and social diversity of the patients they encounter.

I. Demonstrate the ability to present a patient in a professional, knowledgeable manner; prioritize information, document in a concise, well organized and legible manner, presenting the case verbally in a concise and organized manner.

J. Effectively list to patients, family, peers, and members of the health care team and document well all information gained.

II. Clinical Skills

A. Physical examination.
The student must refine the basic skills taught for adults and geriatric patients in the PPC course and on early clinical experiences during the clinical rotation experience into a functioning process for assessing the patient, extracting information from the patient, documenting findings, evaluation processes and treatment plans in a time efficient Manner.

B. The student should acquire the skills to prioritize and to apply the information gained from the exam, as well as to triage the patient according to the level of severity and emergent needs.

C. The specific physical exam skills the student must perform are:
1. A rapid and accurate assessment of the general medical status of the patient
2. An accurate focused physical examination for each involved system as it relates to the patient’s presenting complaints or symptom.
3. Demonstrating appropriate auscultatory, visual, and palpatory skills in examining the patient.
4. Perform a focused and accurate exam of all body systems: Osteopathic structural examination, neurological, HEENT systems, dermatological, cardiopulmonary,
gastrointestinal, endocrine, musculoskeletal, renal, lymphatic, and genitourinary systems.

III. Problem Solving / Medical Decision Making

I. The student is expected to exhibit decision making skills and patient management skills, including the ability to:

A. Prepare legible comprehensive and focused patient cases that include: a comprehensive physical examination, a succinct differential diagnosis, and a diagnostic or treatment plan for each problem.
B. Orally present the content of the case to peers, faculty, and other health care professionals when appropriate.
C. Gain knowledge of the relative costs, benefits, limitations and value to the care of the patient of the diagnostic tests and therapeutics considered for the patient.
D. Identify how critical pathways and practice guidelines can be integrated into the patient's care plans and used to guide the medical care of the patient.
E. Incorporate the patient's perspective, desires, and values into the diagnostic and therapeutic decision making.

IV. Professional and Ethical Skills

I. The student is expected to exhibit the professionalism and ethical skills expected of the osteopathic physician. The student should be able to:

A. Describe the basic elements of informed consent, when informed consent is necessary and implied and how to obtain and document.
B. Demonstrate the role of the physician and the patient decision making concerning routine or controversial treatment or diagnostic procedures, including cost, benefit and risk of each treatment or diagnostic procedure.
C. Identify the importance of and participate in the discussion about advanced directives with a patient.
D. Be aware of the role of palliative care and hospice services in the care of the patient.
E. Learn to incorporate and honor the patient’s family, support systems and values into decision making and the care of the patient.
F. Demonstrate the ability to provide care for all patients regardless of gender, race, socioeconomic status, sexual orientation, ability to pay, or cultural background.
G. Demonstrate respect for other professionals, their role and contributions to the health of the patient.
H. Demonstrate respect for the educational, regulatory, legislative, professional organizations that regulate, supervise and govern the profession of osteopathic medicine. Abide and comply with rules, laws, obligations, deadlines, etc that are established by such agencies.
I. Be knowledgeable of the differing medical care and delivery systems around the country and globe, the difference and impact they have on the health of the populations they serve.
V. Health Promotion and Disease Prevention
I. The student should be able to describe and define:
A. Appropriate diet and exercise standards for each patient to advance wellness or prevent worsening of pathological conditions
B. Appropriate safety and risk reductions actions for the prevention of accidents, injury illness, etc including but not limited to: the use of helmets, gun safety, seat belts, immunizations, avoidance of smoking and social drugs, etc.
C. Use of OMM/OPP to restore normal function and structure of the patient.
D. Cardiovascular and Pulmonary Disease risk factors, their individual contributions to cardiovascular and pulmonary disease, and the current recommendations for screening and management:
   1. hypertension
   2. hyperlipidemia
   3. ASCAD
   4. smoking
   5. diet and exercise
   6. diabetes
   7. asthma/copd/emphysema
B. Risk factors for the most common cancers, current screening guidelines, and the management of risk factors when appropriate:
   1. breast
   2. lung
   3. colon
   4. skin cancer
   5. cervical, ovary and uterine cancer
   6. prostate cancer
   7. testicular cancer
C. Risk factor and screening guidelines for psychological and behavioral issues
   1. Depression
   2. Suicide
   3. Panic Disorder
   4. Organic disease-schizophrenia, paranoia, bi-polar disorder
   5. Substance Abuse

VI. Osteopathic Specific Competencies
A. The student should however exhibit those competencies inherent to the practice of osteopathic medicine including:

1. Be able to relate the “whole patient” considerations in the assessment and management of emergent patients including cultural, social, spiritual, family, and behavioral considerations.
2. Be able to perform a comprehensive examination of the patient with attention to the palpatory and visual examination of the musculoskeletal system.
3. Be able to determine and utilize in the evaluation and treatment of the patient the students knowledge of somatovisceral and viscerosomatic reflexes and disorders.
3. Perform where appropriate osteopathic musculoskeletal manipulation.

INTERNAL MEDICINE COMPETENCY BASED CURRICULUM

On Line Case Modules and Presentations
A. Review the on line pre-case information OR any chapter or suggested reading prior to attempting the case.
B. Initial decision making should follow the history and physical findings, taking care to consider all diagnostic areas of the case prior to making a diagnosis
C. Formulate a differential diagnosis and rule out those diagnosis that do not apply in a systematic fashion,
D. Formulate a diagnostic plan, ordering those tests or procedures that will affect the evaluation or outcome of the patient only.

F. Determine the most appropriate treatment based upon those findings.
The following is a list of the on-line interactive cases the student should complete and on which the post rotation exam is partially based, along with the VCOMTV cases and the reading assignments throughout the month.

Case 1. Abdominal Pain
Identify the common causes of abdominal pain according to signs and symptoms, key diagnostic criteria for each, and the appropriate evaluation and management. Specific differential to know:
1. Peptic ulcer disease
2. Dyspepsia
3. Pancreatitis
4. Acute hepatitis
5. Chronic hepatitis
6. Cholecystitis

Case 2 Abdominal Pain
Identify the common causes of abdominal pain according to signs and symptoms, key diagnostic criteria for each, and the appropriate evaluation and management. Specific differential to know:
1. Urinary tract infection
2. Pyelonephritis
3. Irritable bowel syndrome
4. Diverticulitis
5. Pseudomembranous colitis
6. Inflammatory bowel disease

Case 3 and Case 4 Altered Mental Status
Identify the common causes of altered mental status. Know the evaluation of a patient with altered mental status. Identify the key diagnostic criteria for each of the
following causes below.
1. Hyper and hypoglycemia
2. Cerebrovascular accident
3. Transient ischemic attack
4. Meningitis
5. Encephalitis
6. Seizures & Postictal state
7. Hypertensive encephalopathy
8. Vasculitis
9. Arrythmias
10. Overdose
11. Hypoxia or Hypercapnia causing altered mental status
12. Uremic and Wernicke encephalopathies
13. Hypertensive encephalopathy
14. Primary or metastatic tumor
15. Dementia
16. Delirium

**Case 5: Anemia**
Know the evaluation of a patient with anemia. Be able to form a differential of the following etiologies of anemia. Know the appropriate diagnostic studies to order for reach and be able to form an initial management plan for:
1. Iron deficiency anemia
2. Other microcytic anemia's (sideroblastic)
3. Macrocytic anemias
4. Anemia of chronic disease (renal, thyroid, HIV, malignancy)
5. Congenital disorders (Sickle cell, Thalassemia)
6. Hemolytic anemias
7. Pernicious anemia
8. Anemia from GI blood loss

**Case 6 and 7: Chest Pain**
Be able to form a differential for chest pain that includes all of the following (1-12). Know the appropriate diagnostic studies to order and be able to form an initial management plan for each of the following:
1. Anginal Pectoris and Prinzmental Angina
2. Unstable Angina and Acute myocardial infarction
3. Mitral Valve Prolapse
4. Dissecting Aortic aneurysm
5. Pericarditis
6. Cardiomyopathy
7. Chest pain due to GI causes
8. Pneumonia
9. Spontaneous pneumothorax
10. pulmonary embolus
11. pulmonary hypertension
12. inflammation of the pleura
13. costochondritis
14. muscular strain
15. somatic dysfunction

Cases 8 and 9 Arrhythmias and Disorders of Cardiac Output
The medical student should be able to identify the signs and symptoms of the following disorders. The student should know the appropriate diagnostic evaluation to identify each and the initial management plan.
1. Aortic stenosis
2. Aortic insufficiency
3. Pulsus Paradoxicus
4. Fixed splitting of S2
5. Diminished S1
6. Supraventricular tachycardia
7. Atrial Fibrillation, Atrial flutter
8. Ventricular fibrillation
9. Ventricular tachycardia
10. Torsade des pointes
11. Mitral valve Prolapse
12. Mitral valve regurgitation
13. Cardiomyopathy
14. Pericarditis

Cases 10 and 11 Cough and Shortness of Breath
The student should be able to form a differential of the list below by the nature and symptoms of the cough and physical examination. The student should know the diagnostic and initial management plan for each.
1. viral tracheitis
2. bronchitis-acute and copd
3. pneumonia
   a. virgal
   b. legionella
   c. community acquired
   d. lobar vs. interstitial
   e. aspiration pneumonia
   f. institutional pneumonia
4. asthma (know asthma guidelines)
5. Gastroesophageal reflux
6. lung cancer
7. TB
8. congestive heart failure
9. empyema
10. allergy or atopic respiratory disease
11. pulmonary fibrosis
Case 12 Flank Pain, dysuria, and fever
The student should be able to perform an appropriate history, form a differential, and formulate a diagnostic plan and management plan for each of the following:
1. Cystitis
2. Urethritis
3. Pyelonephritis
4. Urethral syndrome
5. Glomerulonephritis
6. Acute Renal Failure
7. Renal Lithiasis

Cases 13 and 14 Joint Pain
The medical student should be able to identify the following differential for joint pain. The student should know the appropriate diagnostic criteria for each and the initial management plan. (The student should not only know pharmacological management but osteopathic, physical and occupational therapy indications and prevention of further disability).
1. Osteoarthritis
2. Rheumatoid arthritis
3. Systemic lupus erythematosus
4. Poly myositis
5. Crystalline arthropathies
6. Scleroderma
7. Aseptic necrosis of the hip
8. Septic arthritis
9. Sarcoidosis

Cases 15 and 16 Congestive Heart Diseases
The medical student should know the appropriate diagnostic evaluation for each of the following causes of congestive heart failure. The student should be able to formulate a management plan according to the following predisposing factors or causes:
1. Endocarditis
2. Valvular heart disease
3. Hypertrophic myocardium
4. Restrictive myocardium
5. Congestive myocardium
6. Percarditis
7. Differentiate right sided vs. left sided heart failure
8. Differentiate causes of systolic vs. diastolic dysfunction
9. Cardiomyopathy
10. Ischemic heart disease

Case 17 Chronic Lung Disease
The medical student should be familiar with the common etiologies, the diagnostics,
and formulate an appropriate management plan to minimize exacerbations for each:
1. Asthma
2. Chronic bronchitis
3. Emphysema
4. Alpha 1 antitrypsin deficiency
5. Smoking related
6. Occupational pulmonary disease

Case 18 Diabetes Mellitus
The student should know the following regarding Diabetes:
1. Presenting signs and symptoms and diagnostic criteria for type I and type II
2. Pathogenesis, genetics, and epidemiology of Diabetes
3. Presenting signs and symptoms and management of diabetic ketoacidosis and nonketotic hyperglycemia coma
4. Dietary recommendations for diabetes (ADA)
5. Key indications for oral hypoglycemic agents and insulin therapy
6. Somogyi effect and dawn phenomena
7. Critical pathways for Diabetes
8. Disease complications and appropriate evaluations and monitoring for those complications (keys to prevention when available)
9. Education of the diabetic patient
10. Diabetic eye, kidney and extremity management

Case 19 HIV with Complicating Illness
The student should be able to:
1. Identify those patients at risk for HIV
2. Know the appropriate screening for HIV
3. Know the signs and symptoms related to the development of the opportunistic infections and be familiar with the management
   a. P. carinii
   b. Candidiasis
   c. Cryptococcus
   d. Cryptosporidiosis
   e. Cytomegalovirus
   f. Mycobacterium avium complex
   g. Mycobacterium TB
   h. Toxoplasmosis
4. Know the signs and symptoms related to the development of HIV related malignancies and the management
   a. Kaposi’s sarcoma
   b. Non-Hodgkin’s lymphoma
   c. Cervical carcinoma
5. Know the appropriate laboratory and diagnostics tests for the HIV patient sensitivity and specificity of screening tests, CD4, lymphocyte count, sputums, hematologic abnormalities, chest xray
for P. carinii, serum and cerebral spinal fluid analysis for Cryptococcus, gm. Stain, urinalysis.

6. Identify appropriate community agencies involved in care and hospice role.

**Case 20 Secondary Hypertension**
The medical student should know the signs, symptoms, appropriate diagnostic evaluation and the initial management of the following:
1. Polycystic kidney disease
2. Renovascular hypertension
3. Cushing’s syndrome
4. Pheochromocytoma

**Cases 21 and 22 Renal Disease and Electrolyte Disorders**
The medical student should know the presenting signs and symptoms, the appropriate evaluation for (including diagnostics) and the management of the following disorders which present with electrolyte imbalance:
1. Acute renal failure
2. Chronic renal failure
3. Dehydration
4. Metabolic acidosis and alkalosis
5. Respiratory acidosis and alkalosis
6. Nephrotic syndrome
7. SAIDH
8. Water intoxication syndromes
9. Electrolytes: The student should know the differential for and initial electrolyte management for the most common electrolyte disorders