I. Rotation Description

Students will learn to evaluate and determine medical treatment of renal and urinary problems, apply laboratory information and testing to specific renal problems and perform a complete abdominal and urogenital history and physical examination. The curriculum is taught through VCOM TV on-line lectures, on-line case modules and presentations, assigned readings, bedside and clinic teaching, journal clubs, grand rounds, and through one-on-one student-preceptor experience in caring for patients in the clinical setting.

II. Rotation Goals

a. To acquire the ability to elicit a history, identify signs and symptoms of, evaluate and order the appropriate diagnostic tests and describe the principles of management for the treatment of symptoms and disease in the following conditions:

   i. UTI
   ii. Cystitis
   iii. Pyelonephritis
   iv. Glomerulonephritis
   v. Acute Renal Failure
   vi. Chronic Renal Failure
   vii. Renal Lithiasis
   viii. Renal Artery Stenosis
   ix. Renal Cancer
   x. Cancer of the Urinary Bladder
   xi. Polycystic Kidney Disease

b. To acquire the ability to interpret the following laboratory tests:

   i. Urinalysis
   ii. BUN
iii. Creatine
iv. Electrolytes
v. Urinary sediment
c. Understand the criteria for and identify the important features of management in a patient with dialysis

III. Rotation Design
The Nephrology rotation occurs in the hospital setting as a consulting service, in the ambulatory clinic and in dialysis centers.

IV. Credits
4 week course = 4 credit hours

V. Suggested Textbook and References
   i. Chapter 5 – Acid/Base Disorders
   ii. Chapter 9 – Acute Kidney Injury
   iii. Chapter 17 – Chronic Renal Failure and the Uremic Syndrome
   iv. Chapter 18 – Anemia & Chronic Kidney Disease
   v. Chapter 20 – Renal Osteodystrophy
   vi. Chapter 23 – Nephrotic Syndrome versus Nephritic Syndrome
   vii. Chapter 36 – Acute Tubulointerstitial Nephritis
   viii. Chapter 40 – Nephrolithiasis
   ix. Chapter 41 – Primary (Essential) Hypertension
   x. Chapter 45 – Hypertensive Emergencies & Urgencies
   xi. Chapter 50 – Hemodialysis
   xii. Chapter 51 – Peritoneal Dialysis

VI. Course Grading/Requirements for Successful Completion of the Nephrology Rotation
a. Attendance according to VCOM and preceptor requirements
b. Preceptor Evaluation at end-of-rotation

Grading policies, academic progress, and graduation requirements may be found in the College Catalog and Student Handbook at: http://www.vcom.vt.edu/catalog/.

VII. Clinical Performance Objectives
The end-of-rotation evaluation for this rotation will be completed by your preceptor and is based on clinical core competencies. These core competencies reflect student performance in 6 key areas: communication, problem solving, clinical skills, medical knowledge, osteopathic medicine and professional and ethical considerations. Your end-of-rotation evaluation from your preceptor will be based directly on your performance in these 6 core competencies as described below.

a. Communication - the student should demonstrate the following clinical communication skills:
   1. Effective listening to patient, family, peers, and healthcare team
   2. Demonstrates compassion and respect in patient communications
3. Effective investigation of chief complaint, medical and psychosocial history specific to the rotation
4. Considers whole patient: social, spiritual & cultural concerns
5. Efficiently prioritizes essential from non-essential information
6. Assures patient understands instructions, consents & medications
7. Presents cases in an accurate, concise, well organized manner

b. Problem Solving – the student should demonstrate the following problem solving skills:
   1. Identify important questions and separate data in organized fashion organizing positives & negatives
   2. Discern major from minor patient problems
   3. Formulate a differential while identifying the most common diagnoses
   4. Identify indications for & apply findings from the most common radiographic and diagnostic tests
   5. Identify correct management plan considering contraindications & interactions

c. Clinical Skills - the student should demonstrate the following problem solving skills:
   1. Assesses vital signs & triage patient according to degree of illness
   2. Perform good auscultory, palpatory & visual skills
   3. Perform a thorough physical exam pertinent to the rotation

d. Osteopathic Manipulative Medicine - the student should demonstrate the following skills in regards to osteopathic manipulative medicine:
   1. Apply osteopathic manipulative medicine successfully when appropriate
   2. Perform and document a thorough musculoskeletal exam
   3. Utilize palpatory skills to accurately discern physical changes that occur with various clinical disorders
   4. Apply osteopathic manipulative treatments successfully

e. Medical Knowledge – the student should demonstrate the following in regards to medical knowledge:
   1. Identify & correlate anatomy, pathology and pathophysiology related to most disease processes
   2. Demonstrate characteristics of a self-motivated learner including demonstrating interest and enthusiasm about patient cases and research of the literature
   3. Are thorough & knowledgeable in researching evidence based literature
   4. Actively seek feedback from preceptor on areas for improvement
   5. Correlate symptoms & signs with most common diseases

f. Professional and Ethical Behaviors - the student should demonstrate the following professional and ethical behaviors and skills:
   1. Is dutiful, arrives on time & stays until all tasks are complete
   2. Consistently follows through on patient care responsibilities
   3. Accepts & readily responds to feedback, is not resistant to advice
   4. Assures professionalism in relationships with patients, staff, & peers
   5. Displays integrity & honesty in medical ability and documentation
   6. Acknowledges errors, seeks to correct errors appropriately
   7. Is well prepared for and seeks to provide high quality patient care
   8. Identifies the importance to care for underserved populations in a non-judgmental & altruistic manner
g. Osteopathic Manipulative Medicine Components

Students must be familiar with the OMM didactic and workshop requirements for their OMS-4 year as described in the Osteopathic Manipulative Medicine website.