



# Edward Via College of Osteopathic Medicine

## 4<sup>th</sup> Year Clinical Rotation: Pharmacology

MED 8401: Elective Clinical Rotation I  
MED 8411: Elective Clinical Rotation II  
MED 8421: Elective Clinical Rotation III  
MED 8431: Elective Clinical Rotation IV

## COURSE SYLLABUS

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### I. **Rotation Description**

Family physicians write prescriptions on a daily basis, in both the inpatient and outpatient settings, so it is important to learn how to optimize pharmacotherapy in such a way that decreases patients' morbidity and mortality. Additionally, cultivating the skills necessary for life-long learning is a vital part of training as new knowledge is available daily.

### II. **Rotation Goals**

- Demonstrate knowledge and application of the pharmacotherapeutic options for the treatment of common chronic diseases of patients cared for by family physicians
- Develop a systematic approach to antibiotic treatment of common inpatient and outpatient infections
- Cultivate the skills necessary for life-long learning and apply best practices
- Recognize potential drug problems and optimize pharmacotherapy in patients admitted to the hospital as well as those cared for in the outpatient setting

### III. **Rotation Design**

The Pharmacology student will observe and participate in care of patients in various settings.

### IV. **Credits**

2 week course = 2 credit hours

## V. Suggested Textbook and References

- a. Antibiotics
  1. Choice of antibacterial drugs. Treatment Guidelines from the Medical Letter. 2007; 5:33 – 50.
- b. Asthma
  1. National Heart Blood and Lung Institute. National Asthma Education and Prevention Program. Expert panel report 3: guidelines for the diagnosis and management of asthma. NIH publication no. 08-5846. Bethesda, MD: US Department of Health and Human Services, October 2007.
  2. Drugs for Asthma. Treatment Guidelines from the Medical Letter. 2008; 6:83-90.
- c. COPD
  1. Rabe KF, Hurd S, Anzueto A, et al. Global Strategy for the diagnosis, management and prevention of chronic obstructive pulmonary disease: GOLD Executive Summary. *Am J Respir Crit Care Med* 2007; 176: 532-555.
  2. Drugs for chronic obstructive pulmonary disease. Treatment guidelines from The Medical Letter. 2007; 5:95-100.
- d. Diabetes Mellitus
  1. Standards of medical care in diabetes – 2010 American Diabetes Association. *Diabetes Care* 2010; 33 (Suppl 1): S4-S10
  2. Drugs for Type 2 Diabetes. Treatment guidelines from The Medical Letter. 2008; 6:47-54.
  3. Nathan DM, Buse JB, Davidson MB, et al. Medical management of hyperglycemia in Type 2 Diabetes: A consensus algorithm for the initiation and adjustment of therapy. *Diabetes Care* 2009; 32:193-203.
  4. Hyperglycemic crises in diabetes. American Diabetes Association. *Diabetes Care* 2004; 27(Suppl 1):S94-102.
- e. Heart failure
  1. Development and implementation of a comprehensive heart failure guideline. Heart Failure Society of America. *Journal of Cardiac Failure* 2006; 12:e3-e9.
  2. Heart failure in patients with left ventricular systolic dysfunction. Heart Failure Society of America. *Journal of Cardiac Failure* 2006; 12:e38-e57.
  3. Evaluation and management of patients with heart failure and preserved left ventricular ejection fraction. *Journal of Cardiac Failure* 2006; 12:e80-e85.
  4. Evaluation and management of patients with acute decompensated heart failure. *Journal of Cardiac Failure* 2006; 12:e86-e103.
- f. Hyperlipidemia/CAD
  1. Adult Treatment Panel III Guidelines At a Glance Quick Desk Reference. National Cholesterol Education Program. US Dept of Health and Human Services. NIH Publication no. 01-3305. May 2001.
  2. Drugs for lipids. Treatment guidelines from The Medical Letter. 2008; 6:9-16.
  3. Snow V, Barry P, Fihn SD, et al. Primary Care Management of Chronic Stable Angina and Asymptomatic Suspected or Known Coronary Artery Disease: A Clinical Practice Guideline from the American College of Physicians. *Ann Intern Med.* 2004;141:562-567.
  4. Carl J. Lavie, Richard V. Milani, Mandeep R. Mehra, and Hector O. Ventura Omega-3 Polyunsaturated Fatty Acids and Cardiovascular Diseases  
*J Am Coll Cardiol.* 2009; 54:585 - 594.
- g. Hypertension
  1. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *JAMA.* 2003; 289:2560-2572.
  2. Drugs for hypertension. Treatment guidelines from The Medical Letter. 2009; 7:1-10.

3. Calhoun DA, Jones D, Textor S, et al. Resistant hypertension. Diagnosis, evaluation and treatment. *Hypertension* 2008; 51:1403-19.

## VI. Course Grading/Requirements for Successful Completion of the Pharmacology 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 auscultatory, 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