



Edward Via College of Osteopathic Medicine

4th Year Clinical Rotation: Allergy/Immunology

MED 8210: Medical Selective Clinical
Rotation II MED 8211: Medical Selective
Clinical Rotation II

COURSE SYLLABUS

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I. Rotation Description

During the fourth year Allergy/Immunology rotation, students expand their knowledge of common adult infections. They learn about the treatment of acute and chronic medical conditions, including asthma, food allergies, stinging insect allergy, anaphylaxis, and urticaria. The student will also participate in the work-up of immunologic deficiencies when applicable. The student is challenged to acquire the ability to apply this knowledge in diverse clinical settings with the majority being in an outpatient consultative service. The curriculum is taught through 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

- To acquire the knowledge, skills and competencies that are required to evaluate and treat patients with acute and chronic allergic and immunologic medical conditions commonly found in the adult and pediatric patient.
- To develop the physical examination and clinical skills required to interpret information relative to normal and abnormal structure, function and physiology.
- To develop the psycho-social and communication skills and competencies that are required to communicate and treat a wide diversity of patients.
- To develop the ability to research medical literature and scientific resources for information that affects the patient's condition, treatment and outcomes and the ability to evaluate and apply scientifically valid information to maximize the outcome of the patient.
- To develop knowledge, skill application and understanding of the indications, contraindications and application of medical procedures and therapies common to the specialty, including but not limited to ordering and interpretation of diagnostic studies, utilization of pharmacological agents, incorporation of osteopathic principles and practices into the patient's care, and clinical procedures such as allergy testing and immunotherapy.

III. Rotation Design

The rotation will be primarily clinic-based with the student seeing a mixture of adult and pediatric patients with allergic and immunologic conditions.

IV. Credits

4 week course = 4 credit hours (MED 8210)

2 week course = 2 credit hours (MED 8211)

V. Suggested Textbook and References

- a. The Washington Manual of Allergy, Asthma, and Immunology Subspecialty Consult
- b. Readings from Food, Allergy & Anaphylaxis network, www.foodallergy.org
- c. Readings from American Academy of Allergy, Asthma & Immunology, <http://www.aaaai.org/home.aspx>
- d. Adkinson: Middleton's Allergy: Principles and Practice, 7th ed. is also available in the electronic VCOM library under MD Consult. This is an extensive textbook that can be referred to for deeper understanding of the topic.

VI. Course Grading/Requirements for Successful Completion of the Infectious Disease 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.

VIII. Curriculum

The specific reading assignments in this textbook have been designed to correspond to the core clinical topics for the rotation and includes topics, objectives, reading assignments, article assignments, VCOM TV videos and any cases assigned to the rotation.

1. Hypersensitivity disorders
 - a. Reading assignment: Washington Manual: Chapters 2 & 3 (pg. 4-22), Ch 8 (pg.59-68), Ch 10 (pg. 77-84)
 - b. Objectives:

- i. Understand the mechanisms of hypersensitivity disorders and examples of each of the types
 - ii. Discuss symptoms, physical exam findings and common treatments:
 - 1. Allergic rhinitis
 - 2. Sinusitis
 - 3. Eczema/atopic dermatitis
 - iii. Understand indications and contraindications for both in vivo and in vitro allergen testing
- 2. Asthma
 - a. Reading assignment:
 - i. Position statement from aaaai.org (<http://www.aaaai.org/practice-resources/Statements-and-Practice-Parameters/AAAAI-Statements.aspx>) on [Exercise induced asthma](#)
 - ii. Washington Manual: Ch 4-7 (pg. 23-58)
 - b. Objectives:
 - i. Discuss diagnosis and risk factors for asthma
 - ii. Know indications for pulmonary function tests and basic interpretation
 - iii. Discuss therapy for asthma based on disease severity (acute and chronic) including the following therapies:
 - 1. Beta-agonist inhalers (short and long-acting)
 - 2. Inhaled corticosteroids
 - 3. Oral corticosteroids
 - 4. Leukotriene receptor antagonists
 - 5. Anti-IgE therapy
 - iv. Discuss differential, diagnosis and therapy of other asthma variants:
 - 1. Exercise-induced asthma
 - 2. Hypersensitivity pneumonitis
 - 3. Occupational asthma
 - 4. Allergic bronchopulmonary aspergillosis (ABPA)
- 3. Food allergy
 - a. Reading assignment:
 - i. Review website www.foodallergy.org under education tab.
 - 1. Food allergy action plan
 - 2. Patient handouts
 - ii. Washington Manual: Chapter 16 (pg 125-134)
 - b. Objectives:
 - i. Organize food allergies into categories of IgE mediated and non-IgE mediated diseases
 - ii. Recognizing common food allergens, presentations and which food allergies will likely persist through adulthood
 - iii. Understand symptoms, diagnosis and treatment of
 - 1. Food intolerance
 - 2. Eosinophilic esophagitis
 - 3. Oral allergy syndrome
 - iv. Understand common diagnostic testing for food allergens including
 - 1. Food challenge
 - 2. Skin prick
 - 3. Food elimination diet
 - 4. Laboratory testing
 - v. Recognizing common treatment for food allergy including, but not limited to, avoidance
- 4. Anaphylaxis
 - a. Reading assignment:

- i. Watch video on epi pen demonstration on www.foodallergy.org (<http://www.foodallergy.org/page/links-to-video-stream-for-epi>)
 - ii. Washington Manual: Chapter 16 (pg. 96-102)
 - b. Objectives:
 - i. Understand the etiology of anaphylaxis (IgE dependent and independent)
 - ii. Recognize clinical presentation of anaphylaxis and treatment
 - iii. Be able to counsel patients on anaphylaxis and epinephrine pen usage
- 5. Stinging Insect Allergy
 - a. Reading assignment: Washington Manual Ch 17 (pg. 116-124)
 - b. Objectives:
 - i. Recognize common insects that cause allergy
 - ii. Understand common clinical presentation and diagnostic criteria for insect allergy
 - iii. Understand treatment for stinging insect allergy including
 - 1. Immunotherapy
 - 2. Epinephrine
 - 3. Steroids
 - 4. Oral antihistamines
 - 5. Lifestyle modification
- 6. Drug reactions
 - a. Reading assignment:
 - i. Position statement from aaaai.org <http://www.aaaai.org/practice-resources/Statements-and-Practice-Parameters/AAAAI-Statements.aspx> on [Cephalosporin administration to patients with a history of penicillin allergy](#)
 - ii. Washington Manual: Ch. 14 (pg. 103-115)
 - b. Objectives:
 - i. Describe predictable and unpredictable drug reactions
 - ii. Describe drug and patient risk factors for drug reactions
 - iii. Describe clinical criteria and diagnostic testing for drug allergy
 - iv. Understand clinical presentation and treatment for
 - 1. Serum sickness
 - 2. Drug fever
 - 3. Erythema multiforme
 - 4. Stevens-Johnson Syndrome
 - 5. Toxic epidermal necrolysis
 - 6. Drug-induced hepatitis
 - 7. Allergic induced nephritis
 - 8. Drug-related hematologic manifestations
 - 9. Penicillin and sulfa drug reactions
- 7. Urticaria
 - a. Reading assignment: Washington Manual Ch 9 (pg. 68-76)
 - b. Objectives:
 - i. Define urticarial versus angioedema
 - ii. Recognize urticaria presentations
 - 1. Physical urticarias
 - a. Cold-induced
 - b. Cholinergic
 - c. Dermographism
 - d. Delayed pressure
 - e. Vibratory

- f. Solar
 - g. Aquagenic
 - 2. Exercise-induced
 - 3. Urticarial vasculitis
 - 4. Acute
 - 5. Chronic
 - iii. Understand treatments of urticaria
- 8. Angioedema
 - a. Reading assignment: Washington Manual Ch 9 (pg. 68-76)
 - b. Objectives:
 - i. Discuss hereditary clinical presentation, diagnosis and treatment
 - ii. Recognize conditions associated with acquired angioedema
 - 1. B-cell lymphoproliferative disease
 - 2. T-cell lymphoma
 - 3. Multiple myeloma
 - 4. Myelofibrosis
- 9. Primary immunodeficiencies
 - a. Reading assignment: Washington Manual Ch. 20 (pg. 160-172)
 - b. Objectives:
 - i. Recognize common presentation and diagnosis of
 - 1. Complement deficiencies
 - 2. T & B cell deficiencies
 - 3. X-linked severe combined immunodeficiency
 - 4. IgA deficiency
 - 5. Common variable immunodeficiency
 - ii. Understand general treatment principles for immunodeficiencies
- 10. Graft vs. Host disease
 - a. Reading assignment: Goldman's Cecil Medicine, 24th Ed (available under MD consult in VCOM electronic library) Ch. 48, section Mechanisms of Rejection and Graft-Versus-Host Disease
 - b. Objectives:
 - i. Understand the mechanism of graft-vs.-host disease