

**Ohio University College of Osteopathic Medicine**  
**Centers for Osteopathic Research and Education**  
**Syllabus for Class of 2010 CORE Clinical Rotation: *Surgery Selective***

*Last update: 09/08/2008*

<b>Course Title:</b>	<b>Cardiothoracic Surgery</b>
<b>Instructor of Record:</b>	<b>Peter B. Dane, D.O.</b>
<b>Credit Hour:</b>	<b>6 or 12 Credit Hours</b>
<b>Rotation Length:</b>	<b>2 or 4 weeks</b>
<b>Prerequisites:</b>	<b>Successful completion of Family Medicine Clerkship, Part 1</b>

**1. Rotation Description, Purpose, and Philosophy**

The purpose of this rotation is to provide the student with an overview of the clinical specialty. This rotation is not intended to transform the student into a surgeon, but rather it is to provide the clinical clerk a survey of the specialty.

**2. Rotation Objectives**

A set of learning objectives is provided below. The objectives are intended to guide the student's learning activities and to serve as a baseline for assessment of the student's knowledge, skills, and professional behavior. While these objectives are the focus of the rotation, s/he is to care for all assigned patients.

**Rotation Objectives: Knowledge Domain**

**General Principles**

- Anatomy and physiology of the chest wall, diaphragm, heart, lungs, and other thoracic structures
- Knowledge of invasive and non-invasive cardiothoracic tests and application of these tests to patient management
- History of cardiothoracic surgery
- Ethical principles and scientific method as they apply to cardiothoracic surgery
- Principles which govern preoperative and postoperative care of the cardiothoracic surgery patient
- Blood component therapy and knowledge of the coagulation pathways
- Physiology and methods of anesthesia in cardiothoracic surgery
- Extracorporeal bypass and cardiac mechanical support principles and techniques

**Pathologic Processes**

- Embolism
- Valvular heart disease
- Coronary artery disease
- Cardiac dysrhythmias
- Pulmonary Aortic pathology
- Cardiac neoplasms

## Surgery Selective: Cardiothoracic Surger

- Myocarditis and cardiomyopathies
- Cardiothoracic trauma
- Pericardial abnormalities, congenital and acquired
- Infectious, inflammatory, and environmental insults to the lung
- Lung neoplasms
- Tumors and acquired abnormalities of the chest wall
- Traumatic conditions of the chest wall
- Tracheobronchial and pulmonary trauma
- Diaphragmatic trauma
- Neoplasms and acquired abnormalities of the mediastinum

### **Rotation Objectives: Clinical Skills Domain**

Cardiothoracic surgery necessarily requires specific and highly advanced clinical skills. The student is not expected to develop proficiency in these skills, but is expected to avail him/herself of as many of the following procedures and surgical experiences as possible. The student should make every effort to participate in these surgical procedures as actively as is deemed appropriate and desirable by the cardiothoracic surgery preceptor. The student should also seek out opportunities to perform or assist in these skills in other rotations as well.

- Temporary pacemaker implantation
- Permanent pacemaker implantation
- AICD implantation
- Intraoperative mapping and cardiac ablation
- Coronary artery bypass surgery
- Cardiac transplantation
- Extracorporeal heart bypass
- Mechanical cardiac support and ECMO
- Heart valve repair and replacement
- Surgical management of aortic dissection and aneurysms
- Excision of cardiac tumors
- Surgical management of hypertrophic cardiomyopathy
- Pericardiocentesis
- Surgical management of pericardial neoplasms, effusions, tamponade, and constrictive pericardial disease
- Thoracotomy
- Sternotomy
- Mediastinotomy
- Video-assisted thoracic surgery
- Bullectomy
- Lung reduction surgery
- Lung transplantation
- Surgical management of foreign bodies of the airway
- Tube thoracostomy
- Needle decompression

## Surgery Selective: Cardiothoracic Surger

- Resection of lung and neoplasms
- Surgical management of tracheal neoplasms including resection and reconstruction
- Resection of chest wall neoplasms
- Resection of mediastinal neoplasms
- Surgical management of thoracic and diaphragmatic trauma
- Endobronchial procedures
- Tracheal intubation

### 3. Orientation to the Rotation

The student should try to meet with the preceptor either prior to or on the first day of the rotation. Clarifying the following details with the preceptor will help to ensure a rewarding and successful rotation:

- a. Student responsibilities on the service.
- b. Preceptor expectations of the student on the service.
- c. Goals, objectives, and the structure of the rotation.
- d. Required rotation assignments and responsibilities in the preceptor's practice (e.g. clinics, lectures, conferences, other didactics, journal clubs, rounds, office hours, morning report).
- e. Discuss the Evaluation of Student Clinical Performance form. The student should ask for feedback several times during the rotation, especially at mid-rotation. In addition, he/she should be prepared to share past clinical experiences and personal objectives for this rotation with the preceptor.

### 4. Required Learning Activities, Assignments, and Responsibilities

In order to earn academic credit for this rotation, the following activities must be completed successfully:

- a. Fulfill all required responsibilities identified by the preceptor during orientation.
- b. Attend and participate in all CORE education day and other didactic presentations as described in the Year 3 and 4 Student Manual and as assigned by the CORE Assistant Dean.
- c. *Within two weeks of the end of the rotation,*
  - Submit the online Student Evaluation through New Innovations.
  - Submit to the CORE office a 1-2 page summary specifically describing how the student met the established objectives as stated in this syllabus. (This evaluation activity will serve as an alternative to the standard post-rotation exam.)
  - Ensure that your preceptor's written evaluation is completed and submitted to the CORE office.

### 5. Student Performance Evaluation

A student's grade for this rotation will be based on completion of all assignments and the following criteria.

#### The Preceptor's Written Evaluation

A student must receive a passing grade from the preceptor in order to pass the rotation. If the preceptor considers the student's progress to be *Marginal*, the CORE Assistant Dean will, in consultation with the preceptor, recommend an appropriate remediation plan to the Associate Dean for Pre-Doctoral Education for approval. If the preceptor grades the student progress as *Failure*, the student will be given a grade of "F" for the rotation and will be referred to the Committee on Student Progress (CSP).

#### Acceptance of Summary

The CORE Assistant Dean or the Instructor of Record (the Associate Dean for Predoctoral Education) must determine that the one-to-two page summary of how the student met the objectives is acceptable.

### 6. Recommended Resources

1. *Sabiston and Spencer Surgery of the Chest*. Frank Sellke. 7<sup>th</sup> ed. Philadelphia, PA: W.B.Saunders, 2005.
2. *Kirklin/Barratt-Boyes Cardiac Surgery*. Nicholas T. Kouchoukas. 3<sup>rd</sup> ed. New York: Churchill Livingstone, 2003.

## Surgery Selective: Cardiothoracic Surger

3. *Perioperative Care in Cardiac Anesthesia and Surgery*. Davy C. H. Cheng. 1<sup>st</sup> ed. Philadelphia, PA : Lippincott Williams & Wilkins, 2006.
4. *The ICU Book*. Paul L. Marino. 3<sup>rd</sup> ed. Philadelphia, PA: Lippincott Williams & Wilkins, 2007.
5. *Synopsis of Diseases of the Chest*. Richard S. Fraser. 3<sup>rd</sup> ed. Philadelphia, PA: Elsevier/Saunders, 2005.
6. *Cardiopulmonary Bypass: Principles and Techniques of Extracorporeal Circulation*. Christina T. Mora. 1<sup>st</sup> ed. New York: Springer-Verlag, 1995. (Please note: THIS BOOK IS OUT OF PRINT)

See the Class of 2010 Year 3 and 4 Student Manual booklist for a list of resources approved for ALL rotations.

### 7. Standards of Professional Conduct

The OU-COM Honor Code applies to all activities in the CORE as well as on the Athens campus. “As a member of the medical profession, I will maintain the highest standards of academic and personal behavior. As a medical student I will not cheat or plagiarize or tolerate that behavior in others.” OU-COM Honor Code

Students are encouraged to study together and to share their knowledge freely with one another during the learning process. During examinations, however, no assistance from other students or from outside sources is allowed, unless explicitly permitted by the CORE office. Books, notes, and other materials must be left at the periphery of the testing area during examinations.

Professional standards required of a member of the Osteopathic profession are a requirement for passing this rotation, as is compliance with the professional standards of the hospital and outpatient offices of the student’s preceptor. Students are expected to maintain high professional standards of behaviors. They should exhibit such personal characteristics as honesty and integrity, as well as to maintain patient confidentiality at all times. Unprofessional behavior may result in a failing grade in this rotation, regardless of other academic performance on this rotation, and could subject the student to dismissal from the hospital in which they are based. Professional conduct shall be evaluated by the CORE Assistant Dean through observation of and interaction with the student, his/her preceptor, other hospital attending physicians and staff.

### 8. Tips for Successfully Completing the Rotation

Success on this rotation requires the student to be proactive. Taking an interest in the specialty and becoming an active team member of the service is critical to learning in a clinical setting. Remember, the clinical learning environment differs from the classroom. The student will be expected to think on his/her feet and learn as s/he goes. To capitalize on *the learning moment*, seek out opportunities to ask questions and speak up appropriately.

In addition, be sure to:

- review the syllabus to understand all requirements
- discuss with the preceptor previous clinical experiences and personal goals and objectives for this rotation
- clarify the preceptor’s expectations of performance early on in the clerkship
- come prepared to take advantage of the opportunities this rotation has to offer

*If there are any questions, please contact the CORE Administrator or CORE Assistant Dean.*