Course Description

The Surgery Clerkship consists of eight weeks of surgery, which will usually be divided into four (4) weeks of general surgery and four weeks of a surgical subspecialty. Students will be expected to take call as assigned by their preceptor. General surgery should include exposure to a variety of surgical topics and experiences, including minor outpatient surgery, gastrointestinal (abdominal surgery), hernia repair, breast, endocrine, and trauma. Exposure to the topics will be through reading, hospital lectures, seminars and meetings, and hands-on experiences such as performing H&P's, participating in surgical rounds, writing daily progress notes, participating in surgeries, attending all surgical conferences, and performing tasks as assigned by the preceptor. The service should be organized to provide the maximum degree of practical clinical exposure and learning in the areas of diagnosis, management and therapy in surgery, which is consistent with a third and fourth year osteopathic medical student's level of knowledge. Opportunities for learning such as lectures, reading, consults and history and physical examination (H&P) review will be available.
Course Goals

The general goals of the Surgery Clerkship are to:

1. Promote the student’s attainment of a fundamental surgical knowledge base.
2. Introduce the student to basic surgical procedures, including suturing techniques, wound management, nasogastric tube placement, central line access, urethral catheterization, and IV catheter insertion.
3. Facilitate understanding of a surgical approach to clinical problem solving.
4. Promote acquisition of basic surgical diagnosis and management capabilities.
5. Promote the continued development of the student’s professional and ethical behavior.
6. Develop an understanding for appropriate timing of referral for surgical evaluation.

By the end of the Surgery clerkship, the student is expected to have achieved, at a minimum, the following objectives through reading, conference attendance, observation, discussion, and hands-on clinical experience.

Patient Care

Medical Students should:

1) Create and sustain therapeutic and ethically sound relationships with patients and their families.
2) Be able to obtain appropriate histories and perform skillful and comprehensive physical examinations by developing effective listening skills and the ability to elicit and provide information.
3) Develop appropriate differential diagnoses and patient care management plans.
4) Recognize and understand the principles for managing life-threatening situations.
5) Perform and accurately interpret results such as labs and diagnostics tests in patient care management.
6) Develop effective methods of encouraging patient health and wellness through patient education.

Medical Knowledge

Medical Students should:

1) Demonstrate their knowledge in basic science and clinical medicine.
2) Normal structure and function of the body.
3) The molecular, cellular and biochemical mechanisms in understanding homeostasis.

Professionalism

Students are expected to conduct themselves at all times in a professional manner and to exhibit characteristics of a professional student. Measured by the following behaviors:

- Altruism
- Commitment to competence and excellence
- Dependability and punctuality
- Honesty and integrity
- Respect for others
- Responsibility and reliability
- Self-assessment and self-improvement
- Accountability

In addition to these behaviors there are expectations for attendance, appropriate attire, and general professional maturity. You will be observed in the clinical setting, small group learning sessions, and at lectures.

**Course Objectives**

<table>
<thead>
<tr>
<th>Objective:</th>
<th>Osteopathic Core Competencies</th>
<th>Programmatic Level Educational Objectives</th>
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<tr>
<td>Interprofessional Education</td>
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<td>1. Provide teamwork training during the clerkship as an active patient-based learning by solving problems in a real clinical setting.</td>
<td>III.3, IV.4, VII.2</td>
<td>1,4,6</td>
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<td>2. Formulate a prioritized list of the 8-10 most common differential diagnoses for each of the problems/diseases specified by combining clinical information and outside resources effectively (literature search, readings, etc.)</td>
<td>III.2.a</td>
<td>1,3,5,6</td>
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<td>3. Formulate a cost effective diagnostic approach consistent with the prioritized differential diagnoses</td>
<td>III.2.a,c</td>
<td>5,7</td>
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<td>4. Define therapies for common disease processes encountered in Surgery</td>
<td>II. 2-3</td>
<td>1</td>
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<td>5. List common risks vs. benefits to be considered when selecting treatments and management therapies</td>
<td>III. 3</td>
<td>1,4,5</td>
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<td>6. Perform a thorough history and physical exam.</td>
<td>III.3.a</td>
<td>1,3,4</td>
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<td>7. Present cases concisely, emphasizing the pertinent elements of the historical and physical findings, labs, treatments, and the biopsychosocial explanations for each problem</td>
<td>III.6.e</td>
<td>1,4</td>
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<td>8. Recognize urgent/emergent situations and alert appropriate health care providers</td>
<td>III.6.f</td>
<td>1,4</td>
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<td>9. Demonstrate professionalism, compassion, and empathy when communicating with patients and healthcare team members</td>
<td>V. 1-3</td>
<td>3,4</td>
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<td>10. Demonstrate effective communication in the patient’s chart by creating a comprehensive and pertinent legal document</td>
<td>III. 6</td>
<td>3,4</td>
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<td>11. Demonstrate a desire to learn by asking questions of faculty, fellow students, and team members</td>
<td>III.6.g</td>
<td>1,4,6</td>
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<td>12. Exhibit a capable and professional demeanor by concern for patients and in interactions with team members</td>
<td>V.3-4</td>
<td>1,6</td>
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13. Exhibits the ability to recognize the patient as a whole person and promote and integrate OMT into the clerkship

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<td>1.1.a</td>
<td>1.5.a</td>
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### Required Resources and Equipment

Textbooks:
- *Essentials of Surgery and Surgical Specialties* by Lawrence, 6th Edition
- WISE-MD modules as assigned by Clerkship director

### Student Responsibilities Regarding Patient Supervision

All medical activities involving medical students must be supervised by a licensed physician responsible for the care of the patient. The supervising physician has the responsibility for determining the level of supervision needed.

### Equipment

Students are required to bring their stethoscope to each rotation. Additional equipment will be recommended at the discretion of your site attending.

### Reading

Required reading will be assigned during clerkship

Your required text is *Essentials of General Surgery and Surgical Specialties* 6th Ed. by Peter F. Lawrence. Read about the diseases and procedures you see each day. This e-book is available on the library Clerkship Site. There are quizzes at the end of each chapter. In addition, WISE-MD modules cover material essential for doing well on the COMAT. In addition to this text, you may have suggested readings given to you by your attending surgeon. You should discuss these topics with the surgeon at your site.

### Grading Information

#### Assignment of Grades

A grade for each rotation will be assigned by the Clerkship Director or her/his designee. A letter grade of P-Pass, F-Fail or H-Honors will be assigned for each third year core rotation. Elective and Emergency medicine rotations shall only be graded as P-Pass or F-Fail.

#### Elements of Rotation Grading

Each third year core rotation will have five (5) elements contributing to the final grade and each element must be individually passed to pass the clerkship:

- Clinical Performance-Preceptor Evaluation(s)
- Cognitive (COMAT) Performance
- Completion of Case Modules
- Completion of Case Logs
- Completion of Student Evaluation of Rotation
Clinical performance will be graded by the supervising preceptor. This assessment (see Student Assessment Form) includes ten (10) questions designed to assess academic skills and core competency acquisition. Grading on elective rotations will be solely determined by this assessment. Students are expected to achieve a score of 2 or 3 for each domain. An average score of at least 1.7 on all observed skills and competencies must be obtained to pass this element.

*In addition to the requirements above, students must receive a minimum score of two (2) on the preceptor's assessment of Professionalism (Question 7) to pass this element.*

Cognitive performance will be measured by the end-of-rotation COMAT exam. The NBOME provides a conversion table to obtain a percentile rank from the student’s raw score. A percentile rank of 3 corresponds to a raw score of 81 and is -1.88 Standard Deviations below the national adjusted mean. A minimum raw score of 80 is needed to pass this element.

Clinical reasoning will be assessed through completion of the assigned online case modules. Completion of all case module is required to pass this element. The student will not be permitted to sit for the COMAT exam if the case module is not completed by the last Wednesday of the rotation.

**Attainment of Honors**

Attainment of Honors (H) for each third-year core rotation will be limited to the highest performing 10% of the class based on cumulative points earned for the rotation. Honors for all core rotations will be determined at the end of Year 3 when all final assessments have been recorded. The Clerkship Directors will identify the top 10% of students who will receive the honors designation.

**Student Evaluation of the Preceptor/Site/Rotation**

Students are required to complete evaluations on New Innovations regarding their rotation experience. Student feedback received from the evaluations will assist the Office of Clinical Education in the overall assessment and improvement of clinical rotations and the development of faculty development programs. An annual summary of student comments will be reported anonymously to preceptors and training sites to assist them in making improvements to the rotations that they provide. The evaluations are to be completed by 8:00 AM on the last Friday of the rotation. Students will receive a notice from New Innovations with a link to the evaluations. Students need to complete this evaluation in order to receive a passing grade.

*Failure to complete each clerkship evaluation in a timely manner may result in a finding of non-professional conduct.*

**Failure of a Rotation and Remediation**

A failure of any graded element as described herein will result in failure of the rotation. The requirements for remediation will be determined by the Clerkship Director. This may require a repeat of the COMAT exam and attainment of a minimum passing grade, completion of outstanding cases, or repeating all or part of the clerkship experience. When successfully completed, a remediated passing grade will be so designated on the student’s final transcript.
All Year 3 rotations must be successfully completed to advance to Year 4. The need to repeat any failed clinical rotations may result in a delay in graduation.

Academic Participation
Student responsibilities:

• Reading: Essentials of General Surgery and Surgical Specialties 6th Ed. Read about the diseases and procedures you see each day. In addition, there will be required topics that are essential for learning and passing the exam at the end of the rotation. In addition to this text, you may have suggested reading given to you by your attending surgeon. You should discuss these topics with the surgeon at your site.

• History and physical exam review: A major portion of your time will be devoted to conducting patient histories and physical exams. This is a tremendous opportunity to learn how to interact, gather information and diagnose the disease and treat patients.

• WISE-MD: The Web initiative for Surgical Education of Medical Doctors is a program that focuses on the diagnosis and treatment of common surgical related diseases. The modules are artfully crafted by surgical experts working with technicians using the state-of the art technologies including animation, computer graphics and video to illustrate the important principles related to the diagnosis and treatment of surgical illnesses. Completion of 8 WISE-MD case modules is required before taking the COMAT exam on the last day of the second rotation. Upload the completion report to LEO. Input your bedside procedures into New Innovations by the last Wednesday of the rotation.

• Document all the cases you scrub in for no later than the last Wednesday. No patient identifiers are required. This is also in New Innovations.

Bedside procedures:

• Staple or suture skin
• Physical exam of an acute abdomen
• Drain or staple removal
• I and D or needle aspiration of an abscess
• Dressing Change
• IV placement or blood draw
• Foley placement
• Incentive spirometry teaching
• NG Tube Insertion

• Clinical case completion: All 8 WISE-MD cases of your choice should be completed before taking the COMAT exam on the last day of the second rotation.

Content outline for the COMAT (Comprehensive Osteopathic Medical Achievement Test):
The student should be able to diagnose and manage patients and clinical cases that involve:

1) Hernias: adult and pediatric (Ch. 11, 13)

2) Breast and endocrine: thyroid, parathyroid, adrenals, pancreas, pituitary, and other glands (Ch. 18,19)

3) Fluids and Electrolytes: shock, fluid and electrolytes, surgical nutrition, coagulation and blood. (Ch. 2,3,4,5 and 6)
4) Gastrointestinal: esophagus, diaphragm, stomach, duodenum, small intestine, large intestine, rectum and appendix (Ch. 12,13,14,and 15)

5) Urology, gynecology, and pediatric general surgical issues: (Ch. 29)

6) Hepatobiliary: pancreas, biliary tract, liver and spleen. (Ch. 16,17, and 20)

7) Osteopathic principles and practice in surgical care: somatic dysfunction, viscerosomatic relationships and OMM treatment techniques. Use texts from your first 2 years.

8) Surgical oncology and pathology: (Ch. 22)

9) Trauma: musculoskeletal injury and fractures, blunt and penetrating chest injury. (Ch. 9, 28)

10) Wounds and infections: skin and subcutaneous tissue, immunology and transplantation (Ch. 7,8)

Review the surgery objectives and requirement on the NBOME website. www.nbome.org/comatsu.asp

Course Communication

Students are expected to monitor their BCOM email and are responsible for all communications sent to their official email address. Students are also expected to monitor E-mail, LEO, New Innovations, and Aquifer.

Policies and Procedures

Information regarding course grades, attendance (including excused absences), exam procedures, remediation, appeals, acceptable use of technology, honor code, professional attire, and related policies are stated in the current Student Handbook. Policies regarding non-discrimination, accommodations for disabilities, and Title IX are also referenced within the Student Handbook. All policies and procedures stated therein will apply during this course.

The Student Handbook may be accessed through the BCOM website:

For information regarding emergency or inclement weather, refer to the Campus Safety and Security page on the BCOM website:

For information regarding Clerkship Rotations, refer back to the Student Clerkship Manual on the BCOM Website:

Statement Regarding Reservation of Power

The curriculum, assignments, schedule, syllabus, and any information contained within the course can be altered or changed at any time. In the event of any alterations during the course, students will be
informed officially through their BCOM email. It is the student’s responsibility to obtain the changes or notices even if absent from class.

Appendix

A. Programmatic Level Educational Objectives

*Graduates of the BCOM Doctor of Osteopathic Medicine degree program will be able to:*

1. Integrate knowledge and skills acquired from the biomedical, clinical, social, and behavioral sciences to provide patient care in a supervised setting.
2. Demonstrate competence in the skills of osteopathic manipulative treatment and the application of osteopathic philosophy in patient care.
3. Demonstrate professionalism, characterized by honesty, integrity, ethical behavior, empathy, and responsibility.
4. Communicate effectively with patients, families, faculty, peers, and other members of the healthcare team.
5. Critically appraise, evaluate, and apply scientific evidence to inform patient care and research.
6. Demonstrate awareness of the roles and interactions of professionals within the healthcare system and identify resources to optimize patient care at the individual and community levels.
7. Identify the specific healthcare needs of diverse populations and the ways in which the medical community responds.

B. AOA Osteopathic Core Competencies

1. Osteopathic Philosophy and Osteopathic Manipulative Medicine
2. Medical Knowledge
3. Patient Care
4. Interpersonal and Communication Skills
5. Professionalism
6. Practice-Based Learning and Improvement
7. Systems-Based Practice