Please Note: At MSUCOM, we are constantly working to improve our curriculum and to meet new AOA accreditation guidelines. We need to meet the challenges of modern medicine that force us to innovate. While major changes will generally be instituted at the beginning of the school year, most minor changes may be implemented semester to semester.

Please be mindful of the need to read your syllabi before beginning your rotations.
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Introduction and Overview

The surgery clerkship consists of four weeks of general surgery, which provides exposure to a variety of surgical topics and experiences. This exposure will be through reading, lectures, seminars and hands-on experiences.

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-year osteopathic medical student's level of knowledge and abilities. Opportunities for learning such as lectures, reading, participating in consults and history and physical examination (H&P) review will be available.

Goals

THE 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.
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 attitudes and behavior.

Entrustable Professional Activities

EPA 1: Gather a history and perform a physical examination.
Functions
History

• Obtain a complete and accurate history in an organized fashion.
• Demonstrate patient – center interview skills (attentive to patient verbal and nonverbal cues, patient/family culture, social determinants of health, need for interpretive or adaptive services; seeks conceptual context of illness; approaches the patient holistically and demonstrates active listening skills).
• Identify pertinent history elements in common presenting situations, symptoms, complaints, and disease states (acute and chronic).
• Obtain focused, pertinent histories in urgent, emergent, and consultative settings.
• Consider cultural and other factors that may influence the patient's description of symptoms.
• Identify and sue alternate sources of information to obtain history when needed, including but not limited to family members, primary care physicians, living facility, and pharmacy staff.
• Demonstrate clinical reasoning in gathering focused information relevant to a patient’s care.
• Demonstrate cultural awareness and humility (for example, by recognizing that one’s own cultural models may be different from others) and awareness of potential for bias (conscious and unconscious) in interactions with patients.

EPA 2: Prioritize a differential diagnosis following a clinical encounter.
Functions
• Synthesize essential information from the previous records, history, physical exam, including an osteopathic structural exam, and initial diagnostic evaluations.
• Integrate information as it emerges to continuously update differential diagnosis.
• Integrate the scientific foundations of medicine with clinical reasoning skills to develop a differential diagnosis and a working diagnosis.
• Integrate musculoskeletal considerations that may lead to somatic dysfunction and somatovisceral finding as they may relate to disease or health promotion.
• Engage with supervisors and team members for endorsement and verification of the working diagnosis in developing a management plan.
• Explain and document the clinical reasoning that led to the working diagnosis in a manner that is transparent to all members of the health care team.
• Manage ambiguity in a differential diagnosis for self and patient and respond openly to questions and challenges from patients and other members of the health care team.

EPA 3: Recommend and interpret common diagnostic and screening tests.
Functions
• Recommend first-line, cost-effective diagnostic evaluation for a patient with an acute or chronic common disorder or as part of routine health maintenance.
• Provide a rationale for the decision to order the test.
• Incorporate cost awareness and principles of cost-effectiveness and pre-test/post-test probability in developing diagnostic plans.
• Interpret the results of basic diagnostic studies (both lab and imaging).
• Common lab values (e.g., electrolytes).
• Understand the implications and urgency of an abnormal result and seek assistance for interpretation as needed.
• Elicit and take into account patient preferences in making recommendations.

EPA 4: Enter and discuss orders and prescriptions.
Functions
• Demonstrate an understanding of the patient’s current condition and preferences that will underpin the orders being provided.
• Demonstrate working knowledge of the protocol by which orders will be processed in the environment in which they are placing the orders.
• Compose orders efficiently and effectively, such as by identifying the correct admission order set, selecting the correct fluid and electrolyte replacement orders, and recognizing the needs for deviations from standard order sets.
• Compose prescriptions in verbal, written, and electronic formats.
• Recognize and avoid errors by using safety alerts (e.g. drug-drug interactions) and information resources to place the correct order and maximize therapeutic benefit and safety for patients.
• Discuss the planned orders, including those for osteopathic manipulative medicine (OMM), and prescriptions (e.g. indications, contraindications, risks) with patients and families and use a nonjudgmental approach to elicit health beliefs that may influence the patient’s comfort with orders and prescriptions.

EPA 5: Document a clinical encounter in the patient record.
Functions
• Filter, organize and prioritize information.
• Synthesize information into a cogent narrative.
• Record a problem list, working and differential diagnosis and plan.
• Choose the information that requires emphasis in the documentation based on its purpose (e.g., Emergency Department visit, clinic visit, admission History and Physical Examination).
• Document an osteopathic structural exam.
• Document a procedural note, including an OMM procedure note.
• Comply with requirements and regulations regarding documentation in the medical record.
• Verify the authenticity and origin of the information recorded in the documentation (e.g., avoids blind copying and pasting).
• Record documentation so that it is timely and legible.
• Accurately document the reasoning supporting the decision making in the clinical encounter for any ready (e.g., consultants, other health care professionals, patients and families, auditors).
• Document patient preferences to allow their incorporation into clinical decision making.

EPA 6: Provide an oral presentation of a clinical encounter.
Functions
• Present information that has been personally gathered or verified, acknowledging any areas of uncertainty.
• Provide an accurate, concise, and well-organized oral presentation.
• Adjust the oral presentation to meet the needs of the receiver of the information.
• Assure closed-loop communication between the presenter and receiver of the information to ensure that both parties have a shared understanding of the patient’s condition and needs.
**EPA 7: Form clinical questions and retrieve evidence to advance patient care.**

**Functions**
- Develop a well-formed, focused, pertinent clinical question based on clinical scenarios or real time patient care.
- Demonstrate basic awareness and early skills in appraisal of both the sources and content of medical information using accepted criteria.
- Identify and demonstrate the use of information technology to access accurate and reliable online medical information.
- Demonstrate basic awareness and early skills in assessing applicability/generalizability of evidence and published studies to specific patients.
- Demonstrate curiosity, objectivity, and the use of scientific reasoning in acquisition of knowledge and application to patient care.
- Apply the primary finding of one’s information search to an individual patient or panel of patients.
- Communicate one’s findings of one’s information search to an individual patient or panel of patients.
- Communicate one’s finding to the health care team (including the patient/family).
- Close the loop through reflection on the process and the outcome for the patient.

**EPA 8: Give or receive a patient handover to transition care responsibility.**

**Functions for transmitter of information**
- Conduct handover communication that minimizes known threats to transitions of care (e.g., by ensuring you engage the listener, avoiding distractions).
- Document and update an electronic handover tool.
- Follow a structured handover template for verbal communication.
- Provide succinct verbal communication that conveys, at a minimum, illness severity, situation awareness, action planning, and contingency planning.
- Elicit feedback about the most recent handover communication when assuming primary responsibility of the patients.
- Demonstrate respect for patient privacy and confidentiality.

**Functions for receiver of information**
- Provide feedback to transmitter to ensure information needs are met.
- Ask clarifying questions.
- Repeat back to ensure closed-loop communication.
- Ensure that the health care team (including patient/family) knows that the transition of responsibility has occurred.
- Assume full responsibility for required care during one’s entire care encounter.
- Demonstrate respect for patient privacy and confidentiality.

**EPA 9: Collaborate as a member of an inter-professional team.**

**Function**
- Identify team members’ roles and the responsibilities associated with each role.
- Establish and maintain a climate of mutual respect, dignity, integrity, and trust.
• Communicate with respect for and appreciation of team members and include them in all relevant information exchange.
• Use attentive listening skills when communicating with team members.
• Adjust communication content and style to align with team-member communication needs.
• Understand one’s own roles and personal limits as an individual provider and seek help from the other members of the team to optimize health care delivery.
• Help team members in need.
• Explain to team member’s appropriate utilization of OMM and OPP in the treatment of patients.
• Prioritize team needs over personal needs in order to optimize delivery of care.

**EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and management.**

**Functions**
- Recognize normal vital signs and variations that might be expected based on patient – and – disease - specific factors.
- Recognize severity of a patient’s illness and indications for escalating care.
- Identify potential underlying etiologies of the patient’s decompensation.
- Apply basic and advanced life support as indicated.
- Start initial care plan for the decompensating patient.
- Engage team members required for immediate response, continued decision making, and necessary follow-up to optimize patient outcomes.
- Understand how to initiate a code response and participate as a team member.
- Communicate the situation to responding team members.
- Document patient assessments and necessary interventions in the medical record.
- Update family members to explain patient’s status and escalation – of – care plans.
- Clarify patient’s goals of care upon recognition of deterioration (e.g.; DNR, DNI, comfort care).

**EPA 11: Obtain informed consent for tests and/or procedures.**

**Functions**
- Describes the indications, risks, benefit alternatives, and potential complications of the procedure.
- Communicates with the patient/family and ensures their understanding of the indications, risks, benefit alternatives, and potential complications.
- Creates a context that encourages the patient/family to ask questions.
- Enlists interpretive services when necessary.
- Documents the discussion and the informed consent appropriately in the health record.
- Displays an appropriate balance of confidence with knowledge and skills that puts patients and families at ease.
• Understands personal limitations and seeks help when needed.

EPA 12: Perform general procedures of a physician.

Functions
• Demonstrate the technical (motor) skills required for the procedure.
• Understand and explain the anatomy, physiology, structure and function relationships, indications, risks, contraindications, benefits, alternatives, and potential complications of the procedure.
• Communicate with the patient/family to ensure pre- and post – post procedure explanation and instructions.
• Manage post – procedure complications.
• Demonstrate confidence that puts patients and families at ease.

EPA 13: Identify system failure and contribute to a culture of safety and improvement.

Functions
• Understand systems and their vulnerabilities.
• Identify actual and potential (“near miss”) errors in care.
• “Speak Up” in the face of real or potential errors.
• Use system mechanisms for reporting errors (e.g., event reporting systems, chain of command policies).
• Recognize the use of “workarounds” as an opportunity to improve the system.
• Participate in system improvement activities in the context of rotations or learning experience (e.g., rapid-cycle change using plan – do – study – act cycles; root cause analyses; morbidity and mortality conferences; failure modes and effects analyses; improvement projects).
• Engage in daily safety habits (e.g., universal precautions, hand washing, time – outs).
• Admit one’s own errors, reflect on one’s contribution, and develop an improvement plan.

OBJECTIVES

***The topics marked as (S) Sabiston Textbook or (L) Lawrence Textbook as a suggested reference. (see page 16 under References)***

THE GENERAL SURGERY CLERKSHIP LEARNING OBJECTIVES ENCOMPASS THREE MAIN AREAS.
Knowledge (cognitive)
Skills (psychomotor)
Problem Solving & Professional Development

By the end of the clerkship, given a patient scenario in a hospital/clinical setting, students should be able to do the following with accuracy:
**Acute Abdomen (S)**

SPECIFIC LEARNING OBJECTIVES
1. Discuss the history and physical exam of the abdomen.
2. Analyze the more common causes of an acute abdomen.
3. Compare and contrast the relationship of location and etiology of abdominal pain.

BASIC SCIENCE LINKS
1. Anatomy
2. Physiology

OPC SKILLS REVIEW
1. Abdomen Exam

LABS and OTHER ACTIVITIES
1. MSU Libraries
   a. Access Surgery
      i. Exploring Essential Surgery
         1. The Surgical History
         2. The Surgical Examination
         3. Examination of the Abdomen
2. Topic Review Questions at the end of the chapter
3. On-Line Review Questions

**Fluids and Electrolytes**

Chapter 2 (L) Fluids, Electrolytes and Acid-Base Balance
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116163&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Identify normal electrolyte and pH values.
2. Discuss sources of operative and postoperative fluid losses and replacement.
3. Analyze the presentation and evaluation of Syndrome of Inappropriate Secretion of ADH and electrolyte imbalance and discuss treatments.
4. Compare presentation, diagnosis and treatment of Acid-Base Imbalance.

BASIC SCIENCE LINKS
Physiology
LABS and OTHER ACTIVITIES
1. Topic Review Questions at the end of the chapter: Chapter 2 (L) Fluids, Electrolytes and Acid-Base Balance
2. On-Line Review Questions

**Nutritional Support**
Chapter 3 (L) Nutrition

http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116164&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Discuss the assessment of nutritional status and basic nutritional needs.
2. Discuss indications and techniques of nutritional support.

LABS and OTHER ACTIVITIES
1. Topic Review Questions at the end of the chapter: Chapter 3 (L) Nutrition
2. On-Line Review Questions

**Postoperative Complications**
Chapter 1 (L) Perioperative Evaluation and Management of Surgical Patients

http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116164&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Discuss common postoperative complications:
   a. Fever
   b. Atelectasis
   c. Wound Failure
   d. Site infection
   2. Analyze the various etiology, presentation, evaluation and treatment of malignant hyperthermia.

LABS and OTHER ACTIVITIES
1. Topic Review Questions at the end of the chapter: Chapter 1 Perioperative Evaluation and Management of Surgical Patients
2. On-Line Review Questions

**Coagulation and Transfusion**
Chapter 4 (L) Surgical Bleeding: Bleeding Disorders, Hypercoagulable States, and Replacement Therapy in the Surgical Patient

http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116165&bookid=1363&rotationId=0
SPECIFIC LEARNING OBJECTIVES
1. Be able to diagram and explain the coagulation pathways.
2. Discuss the evaluation of bleeding and clotting disorders.
3. Discuss the evaluation and treatment of a bleeding patient.
5. Topic Review Questions at the end of the chapter: Chapter 4, Surgical Bleeding: Bleeding Disorders, Hypercoagulable States, and Replacement Therapy in the Surgical Patient
6. On-Line Review Questions

Shock
Chapter 6 (L) Surgery Critical Care
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116167&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Describe the primary mechanisms of shock and their etiology.
2. Discuss the evaluation and treatment of the primary mechanisms of shock.

BASIC SCIENCE LINKS
Physiology

OPC SKILLS REVIEW
Vital Skills

Wounds and Wound Healing
Chapter 7 (L) Wound Healing
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116168&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Discuss the process of wound healing
2. Distinguish between the types and treatments of skin ulcers.
3. Compare and contrast the various types of suture material and their advantages and disadvantages.
4. Compare and contrast the various types of local anesthetics and their dosages.
5. Discuss the process of wound healing.

BASIC SCIENCE LINKS
Histology/Physiology
**Antibiotic Therapy**
**Chapter 8 (L) Surgical Infections**
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116169&bookid=1363&rotationId=0

**SPECIFIC LEARNING OBJECTIVES**
1. Analyze the difference between prophylactic use and the treatment of infection.
2. Discuss the bacteriology of common surgical infections.

**BASIC SCIENCE LINKS**
Microbiology/Pharmacology

**Trauma**
**Chapter 9 (L) Trauma**
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116170&bookid=1363&rotationId=0

**SPECIFIC LEARNING OBJECTIVES**
1. Rank the steps and priorities of evaluating a patient with multiple injuries.
2. Discuss the Glasgow Coma Scale.

**OPC SKILLS REVIEW**
Physical Exam

**Burns**
**Chapter 10 (L) Burn**
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116171&bookid=1363&rotationId=0

**SPECIFIC LEARNING OBJECTIVES**
1. Classify the various depths of burn injuries.
2. Discuss the principles of burn care including fluid replacement.
3. Be able to calculate Body Surface Area.
4. Discuss the types of treatment of inhalation injury.

**BASIC SCIENCE LINKS**
Anatomy/Histology/Physiology

**Hernia**
**Chapter 11 (L) Abdominal Wall, Including Hernia**
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116172&bookid=1363&rotationId=0
SPECIFIC LEARNING OBJECTIVES
1. Discuss the layers of the abdominal wall and assess how they pertain to abdominal wall hernias.
2. Distinguish between the various types of abdominal wall hernias and their repairs.

BASIC SCIENCE LINKS
Anatomy

OPC SKILLS REVIEW
Physical Examination

**Esophagus**
Chapter 12 (L) Esophagus
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116173&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Differentiate the anatomy and physiology of the esophagus relative to its functional disorders.
2. Compare and contrast between the different types and treatments of benign and malignant esophageal neoplasms.

BASIC SCIENCE LINKS
Anatomy/Physiology

**Peptic Ulcer Disease**
Chapter 13 (L) Stomach and Duodenum
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116174&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Discuss the physiology of gastric acid production.
2. Explain the various complications of peptic ulcer disease.

BASIC SCIENCE LINKS
Physiology/Histology

**Small Bowel and Appendix**
Chapter 14 (L) Small Intestine and Appendix
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116175&bookid=1363&rotationId=0
SPECIFIC LEARNING OBJECTIVES
1. Discuss Meckel’s diverticulum and its indications for resection.
2. Discuss the presentation and evaluation of appendicitis.
3. Compare and contrast the benign and malignant lesions of the small bowel and appendix.
4. Discuss the presentation, evaluation and etiology of small bowel obstruction.

BASIC SCIENCE LINKS
Anatomy/Histology/Physiology

OPC SKILLS REVIEW
Abdominal Exam

Colon and Rectum
Chapter 15 (L) Colon, Rectum and Anus
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116176&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Discuss the anatomy of the colon to include its divisions, arterial and lymphatic supply.
2. Compare inflammatory bowel disease and its complications.
3. Analyze possible complications and treatment of diverticular disease.
4. Discuss the etiology and evaluation of trans rectal bleeding.
5. Analyze the various premalignant conditions of the colon.
6. Discuss the staging and metastatic pattern of colon cancer.
7. Discuss the evaluation and treatment of hemorrhoids and perirectal abscesses.
8. Discuss the staging and treatment of rectal cancer.

BASIC SCIENCE LINKS
Anatomy/Microbiology/Histology/Physiology

Gall Bladder
Chapter 16 (L) Biliary Tract
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116177&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Analyze the anatomic structures associated with the gall bladder.
2. Assess the presentation and evaluation of cholecystitis.
3. Discuss the bacteriology of acute cholecystitis.
4. Discuss cholelithiasis and its possible complications.
BASIC SCIENCE LINKS
Microbiology/Physiology

Pancreas
Chapter 17 (L) Pancreas
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116179&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Discuss the presentation, etiology and evaluation of pancreatitis.
2. Discuss the difference between acute and chronic pancreatitis.
3. Discuss the complications of pancreatitis.
4. Discuss the presentation, evaluation and treatment of pancreatic cancer.

BASIC SCIENCE LINKS
Physiology/Anatomy/Histology

Liver
Chapter 18 (L) Liver
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116179&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Distinguish between and describe three common benign tumors of the liver and their treatments.
2. Describe the various acute and chronic forms of hepatitis.
3. Explain the testing guidelines for the various types of hepatitis.
4. Discuss the difference in presentation of primary and metastatic liver cancer.

BASIC SCIENCE LINKS
Histology

Breast Tumors
Chapter 19 (L) Breast
http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/content.aspx?sectionid=73116180&bookid=1363&rotationId=0

SPECIFIC LEARNING OBJECTIVES
1. Categorize the more common forms of benign and malignant breast disease.
2. Demonstrate the evaluation of a breast mass.
3. Discuss the staging of breast cancer and the signs of advanced disease.
SPECIFIC LEARNING OBJECTIVES
1. Analyze the relationship anatomy of the thyroid gland.
2. Discuss the physiology of the thyroid and its functional abnormalities.
3. Categorize the benign and malignant forms of thyroid nodules.
4. Discuss the evaluation of a thyroid nodule.
5. Discuss the function of the adrenal glands.
6. Discuss the presentation of benign and malignant adrenal tumors.

BASIC SCIENCE LINKS
Anatomy/Physiology/Histology

SPECIFIC LEARNING OBJECTIVES
1. Discuss the examination of the spleen.
2. Discuss etiology and treatment of splenomegaly.
3. Discuss the effect of splenectomy on the immune status of children and adults.

BASIC SCIENCE LINKS
Anatomy

SPECIFIC LEARNING OBJECTIVES
1. Surgical Oncology
Chapter 24 (L) Surgical Oncology: Malignancy of the Skin and Soft Tissue

BASIC SCIENCE LINKS
Histology

SPECIFIC LEARNING OBJECTIVES
1. Breast Exam

BASIC SCIENCE LINKS
Histology

SPECIFIC LEARNING OBJECTIVES
1. Spleen
Chapter 21 (L) Spleen and Lymph Nodes

BASIC SCIENCE LINKS
Anatomy

SPECIFIC LEARNING OBJECTIVES
1. Abdominal Exam

BASIC SCIENCE LINKS
Anatomy/Physiology/Histology

SPECIFIC LEARNING OBJECTIVES
1. Skin Cancer
Chapter 24 (L) Surgical Oncology: Malignancy of the Skin and Soft Tissue
SPECIFIC LEARNING OBJECTIVES

1. Discuss the presentation and treatment of the three most common skin cancers.
2. Discuss the staging of malignant melanoma.

BASIC SCIENCE LINKS

Histology

OPC SKILLS REVIEW

Physical Exam

College Program Objectives

In addition to the above course-specific goals and learning objectives, this clerkship rotation also facilitates student progress in attaining the College Program Objectives. Please refer to the complete list provided on the MSUCOM website.
The recommended text for OSS 653 is *Essentials of General Surgery*, Fifth Edition, by Peter F. Lawrence. [http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/book.aspx?bookid=1363&rotationId=0](http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/book.aspx?bookid=1363&rotationId=0). The reading assignments will prepare the student well for day to day academic challenges on a general surgery rotation as well as the end of service COMAT. Each chapter contains several review questions within the text and a more extensive list can be found within the online resource that accompanies the text.

Many other excellent texts are available although some, such as Sabiston’s *Textbook of Surgery*, are not as realistic of a daily reading reference for the third year student. The MSU Library has online resources as well, [http://libguides.lib.msu.edu/medicalebooks/](http://libguides.lib.msu.edu/medicalebooks/). “Access Surgery” [http://accesssurgery.mhmedical.com.proxy2.cl.msu.edu/](http://accesssurgery.mhmedical.com.proxy2.cl.msu.edu/) is recommended. Current Diagnosis & Treatment, *SURGERY* of the Lange series is suggested as comparable to *Essentials of General Surgery*. If a reading reference other than *Essentials of General Surgery* is chosen, the student should include all areas of study as outlined in the reading assignments. “Access Surgery” provides a self-assessment area listed as “Q&A for Clerks”.

Completing the reading assignment cannot be stressed enough to insure a successful rotation. Certainly the surgical attending and residents may provide additional reading assignments specific to the day’s activity but it is unlikely that these assignments will be as inclusive or provide the review questions necessary for exam preparation.
Student Responsibilities and Expectations

Available learning activities will differ from hospital to hospital, both in kind and amount. The following are examples of learning activities in which you as a student should participate when they are available at the hospital where you are doing your surgery rotation.

1. **READING:** Read about the diseases and procedures you see each day. Discuss your reading with the resident and attending for their suggestions and experiences. Read surgical textbooks. *ESSENTIALS of GENERAL SURGERY* by Peter F. Lawrence [http://clerkship.lwwhealthlibrary.com.proxy2.cl.msu.edu/book.aspx?bookid=1363&rotationId=0] is highly recommended, but many excellent texts are available. Review books are meant for review and are not to be used as a study reference. They do not provide the scope of basic information you need to acquire at this level of your training.

2. **H&P REVIEW:** A major portion of your time will be devoted to conducting patient history and physical examinations. These, in themselves, are excellent learning opportunities. This is your opportunity to actually study the patient and the disease process. They are truly a living textbook. Learning to perform a meaningful H&P is a tremendous step toward becoming an outstanding diagnostician. After completing an H&P, read about the patient's primary disease process. Learn what questions you may have not asked and exams that you may not have performed that would have provided more information. You should make every effort to have your H&Ps reviewed by your supervisor or resident to insure its accuracy and to improve your recording skills.

3. **SCRUBBING ON SURGERIES:** Depending on the hospital, you will be a member of the surgical team. This is usually based on how many students and residents there are on the surgery service and their policy regarding students scrubbing on cases. If you are aware you will be scrubbing on a surgery, prepare for it by reading and/or discussing it with your supervisor or resident. Read about the disease process involved as well as the anatomy relative to the procedure. Review the basic steps involved with the procedure. Know the more common potential complications, how they present and how they are treated.

4. **MORNING REPORT:** Morning report programs are directed at providing up-to-date information on topics in various medical and surgical disciplines, as well as updating house staff and attending's on recently admitted patients. If your hospital has a morning report program, you are expected to attend.

5. **LECTURES:** Lectures on various topics are usually given at noon at least once a week. They are intended to provide up-to-date information on clinical and research findings and techniques in various fields. If your hospital has a mid-day or other regular lecture program, you are expected to attend.
6. **SEMINARS:** Some hospitals offer several-day seminars once or twice a month as a continuing education service to their community. The seminars usually focus on specific diagnostic and management problems or techniques. Your attendance is encouraged.

7. **CONSULTATION:** Depending on the hospital, you will be expected to participate in surgical consults. The specific procedure for students doing and presenting consults differs from hospital to hospital. Be aware of the procedure for doing and presenting consults at your hospital. Be available to participate in consults. If you know you are going to be doing a consult, prepare for it by reading and/or discussing it with your supervisor or an Intern or Resident on your service.

8. Students are expected to function collaboratively on health care teams that include health professionals from other disciplines in the provision of quality, patient-centered care.

9. Students are expected to identify, access, interpret, and apply medical evidence contained in the scientific literature related to patients health problems.

10. Students are expected to: assess their personal learning needs specific to this clinical rotation, engage in deliberate, independent learning activities to address their gaps in knowledge, skills or attitudes; and solicit feedback and use it on a daily basis to continuously improve their clinical practice.

### General Surgery Rotation Grading Requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Submission Method</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Evaluation by the Attending Faculty</td>
<td>See Page 28 of Syllabi</td>
<td>Within 90 days of the completion of the rotation.</td>
</tr>
<tr>
<td><strong>Student Evaluation of the Rotation</strong></td>
<td>See Page 28 of Syllabi</td>
<td>Within 90 days of the completion of the rotation.</td>
</tr>
<tr>
<td>Student Experience Log-Please keep a copy for your records – You can get the log at the end of this syllabus (pg. 29) or on D2L</td>
<td>Upload to D2L</td>
<td>By 11pm on the last day of the rotation.</td>
</tr>
<tr>
<td>COMAT Examination**</td>
<td>See Page 23 of Syllabi</td>
<td>To be taken the last Friday of the rotation.</td>
</tr>
</tbody>
</table>
Students please understand that you will not have a passing grade for this rotation until ALL of your requirements are in our office and marked as received in your KOBILJAK schedule. This may take months after your rotation ends and your initial grade of “ET” to have your grade changed to a “P”. Thank you in advance for your understanding.

Rotation Corrective Action Process

It is the students’ responsibility to ensure that the reports are submitted and complete within the time specified in the above table.

If the above mentioned requirements are NOT completed the student will receive an “N” grade. Pending the COSE Review as outlined on Page 26:

- The Student will need to schedule another 4-week General Surgery Rotation, OSS 653 through the COM Registrar’s Office

- Students must score at or above 1.0 Standard Deviations below the National Mean on the day you take the exam.

  - Students will NEED to contact the Course Assistant, Shannon Grochulski-Fries at grochuls@msu.edu by the end of the first week of the rotation if you will have a conflict regarding taking the exam on the last Friday of the rotation, in order for consideration of delaying the exam.
  - Students will NEED to contact the Course Assistant, Shannon Grochulski-Fries at grochuls@msu.edu within in 24 hours of an emergency that will keep you from taking the exam the last Friday of the rotation, in order for consideration of delaying the exam.
  - Students must take the exam the last Friday of the rotation. If this deadline is not met (with the exclusion of the above two scenarios) the student will receive an 0 for that attempt of the exam and will need to take and pass the COMAT the next time the exam is offered or will receive an “N” grade for the rotation.
  - Students must score at or above 1.0 Standard Deviations below the National Mean on the day you take the exam.
  - Each exam date that the test is given has a different Standard Deviation and a different National Mean.
  - Each student will be allowed to take the Surgery exam only twice before receiving an “N” grade for the rotation, please note that you can take 2 COMAT Exams on the same day.
  - The second attempt of the exam will need to be done the next time the COMAT exam is offered or the student will receive an “N” grade for the rotation.
  - Students will be notified of their failure by the Department.
• Upon successful completion of the above, the student will be given a passing grade for the course.

• If the student fails the rotation for other reasons (poor performance in the eyes of the specialist and/or Director of Medical Education) or fails the Corrective Action Process outlined above for curricular elements, the student will receive an ‘N’ grade on their transcript. The student will then be subject to a remediation plan designed by the Director of Medical Education in conjunction with the Dean of Student Services and Clinical Curriculum Director.

• The student will need to meet with the Course Coordinator after the Rotation is scheduled but BEFORE it begins to discuss the Corrective Action Process.

**Special Considerations**

**SKILLS**

By the end of the clerkship, the student is expected to have satisfactorily performed, at least once, those skills and procedures listed on the Skills Checklist attached to this syllabus. The student is expected to understand the indications and contraindications, as well as the technique.

Skills listed on the checklist include:

- Perform physical examination of acute abdomen
- Suture/staple skin incision
- Peripheral IV insertion
- Nasogastric tube insertion
- Foley catheter insertion
- Patient teaching, incentive spirometry, drain care, etc.

If these procedures are not completed and documented during the General Surgery Rotation, the student will receive an “ET” grade which will stand until the Checklist is completed and approved by the Course Coordinator. The student has 90 days following the last day of the rotation to submit a completed Checklist. A student who does not submit a completed and approved Checklist within 90 days will receive an “N” grade and must re-take the rotation.
General Surgery (CORE) Exam Information

All students are required to take the NBOME COMAT examination in Surgery on the last Friday of this rotation. If this deadline is not met, (with the exclusion of the two scenarios listed below at 1 and 2) the student will receive an 0 for that attempt of the exam and will need to take and pass the COMAT the next time the exam is offered or will receive an “N” grade for the rotation. Students will need to contact the Course Assistant, Ms. Shannon Grochulski-Fries, 1) by the end of the first week of the rotation if there is a conflict regarding taking the exam on the last Friday of the rotation, or 2) within 24 hours of an emergency that will keep the student from taking the exam the last Friday of the rotation. Course faculty will consider each case and determine if a delay in the exam will be permitted. Should a student be granted a delay in examination, the Department will send written approval and notification of the required reschedule date to the COM Office of the Registrar.

If a student requires an accommodation, a valid VISA from the Resource Center for Persons with Disabilities must be presented to the COM Office of the Registrar 7 days in advance of the COMAT examination date. The student must also disclose which allowed accommodations s/he intends to use for the exam 7 days in advance of the COMAT examination date.

For additional information on exam registration and administration, please visit the COM Office of the Registrar’s COMAT webpage:
http://com.msu.edu/Students/Clerkship/COMAT_Subject_Exams.htm.

Students must score at or above 1 Standard Deviations below the National Mean on the day you take the exam in order to pass the exam. Each student will be allowed to take the exam 2 times before receiving an “N” grade for the rotation. When a student must sit for a re-take of the exam, s/he will be contacted by the Course Assistant, who will provide the student with a deadline by which s/he must sit for the re-take, as well as the consequence for failure to do so. If a student receives an “N” grade for the rotation, s/he will be notified of the failure by the department.

Unsatisfactory Clinical Performance

A student’s clinical performance will be assessed through the Attending Clinical Clerkship Rotation Evaluation. Unsatisfactory Attending Evaluations are governed by the Policy for Retention, Promotion and Graduation (4.e).

An overall “Below Expectations” rating on Section 1 of the Clinical Clerkship Rotation Evaluation will be referred to the Instructor of Record/Department Chairperson for review and grade determination.

Students who receive two or more Clinical Clerkship Rotation Evaluations with an overall “Below Expectations” rating will be referred to the COSE Clerkship Performance Subcommittee for review.

An overall “Below Expectations” rating on Section 2 of the Clinical Clerkship Rotation Evaluation will be referred to the Associate Dean/Student Services. In consultation with the Instructor of Record/Department Chairperson a determination of action will be reached.
Base Hospital Requirements

(To be defined and evaluated by individual hospitals)
MSU College of Osteopathic Medicine Standard Policies

The following are the standard MSUCOM policies students must adhere to across rotations.

CLERKSHIP ATTENDANCE POLICY

Clerkship activities are mandatory and timely attendance is expected at all educational events.

In the event a student must be absent from clerkship activities, he/she must, firstly, have prior approval from the Graduate Medical Education office (DME/DIO, Clerkship Director, and/or Student Clerkship Coordinator per the rotation sites process/policy). The clinical preceptor must also approve the absence, and determine an acceptable make-up plan which may include, but is not limited to: additional time on rotation, additional presentation(s), or written assignment(s). In the event of an emergency, the student must contact the Graduate Medical Education office and clinical preceptor as soon as the situation allows. Any exception to this attendance policy for any given rotation will be noted in the course syllabus.

Abuse of this policy, as determined by the GME office or a clinical preceptor, may be documented in a student evaluation(s) and/or reported to the Associate Dean of Student Services at MSUCOM via the Student Incident Report Form: http://com.msu.edu/Students/Registrar/Policies.htm or via phone call to the Associate Dean of Student Services (517-353-8799).

ROTATION SPECIFIC EXCEPTIONS TO THE ABOVE ATTENDANCE POLICY: Please see page 30 for excused absence request form.

POLICY FOR MEDICAL STUDENT SUPERVISION

Supervisors of the Medical Students in the Clinical Setting
The MSUCOM curriculum includes required clinical experiences in a variety of clinical learning environments. The role of the student is to participate in patient care in ways that are appropriate for the student’s level of training and experience and to the clinical situation. The student’s clinical activities will be under the supervision of licensed physicians. This supervising physician may delegate the supervision of the medical student to a resident, fellow, or other qualified healthcare provider, however, the supervising physician retains full responsibility for the supervision of the medical students assigned to the clinical rotation and must ensure his/her designee(s) are prepared for their roles for supervision of medical students.

The physician supervisor and his/her designee(s) must be members in good standing in their facilities and must have a license appropriate to his/her specialty of practice and be supervising the medical student within that scope of practice as delineated by the credentialing body of the facility.
Level of Supervision/Responsibilities
Clinical supervision is designed to foster progressive responsibility as a student progresses through the curriculum, with the supervising physicians providing the medical student the opportunity to demonstrate progressive involvement in patient care. MSUCOM students will be expected to follow clinical policies of the facility regarding medical records and clinical care. Medical student participation in patient history/physical exam, critical data analysis, management, and procedures will include factors, but not limited to:

- The students’ demonstrated ability
- The students’ level of education and experience
- The learning objectives of the clinical experience

First and second year medical students will be directly supervised at all times (supervising physician or designee present or immediately available.

Third and fourth year medical students will be supervised at a level appropriate to the clinical situation and student’s level of experience. For some tasks, indirect supervision may be appropriate for some students. Direct supervision would be appropriate for advanced procedures.

Supervising physicians will provide medical students with timely and specific feedback on performance. The supervising physician will complete a mid-rotation evaluative discussion with the medical student. Supervising physicians will complete a summative evaluation and are encouraged to contact the course/clerkship director with any gaps in student performance. Medical students with any concern regarding clinical, administrative, and educational or safety issues during his/her rotation will be encouraged to contact the supervising physician or clerkship/course director.

STATEMENT OF PROFESSIONALISM
Principles of professionalism are not rules that specify behaviors, but guidelines that provide direction in identifying appropriate conduct. These principles include the safety and welfare of patients, competence in knowledge and skills, responsibility for consequences of actions, professional communication, confidentiality, and lifelong learning for maintenance of professional skills and judgments. Professionalism and professional ethics are terms that signify certain scholastic, interpersonal and behavioral expectations. Among the characteristics included in this context are the knowledge, competence, demeanor, attitude, appearance, mannerisms, integrity and morals displayed by the student to faculty, peers, patients and colleagues in other health care professions. Students are expected to conduct themselves at all times in a professional manner and to exhibit characteristics of a professional student.
STUDENTS RIGHTS AND RESPONSIBILITIES
Each individual student is responsible for their behavior and is expected to maintain standards of academic honesty. Students share the responsibility with faculty for creating an environment that supports academic honesty and principles of professionalism. Proper relationship between faculty and student are fundamental to the college’s function and this should be built on mutual respect and understanding together with shared dedication to the education process. It is a fundamental belief that each student is worthy of trust and that each student has the right to live in an academic environment that is free of injustice caused by dishonesty. While students have an obligation to assist their fellow students in meeting the common goals of their education, students have an equal obligation to maintain the highest standards of personal integrity.

FACULTY RESPONSIBILITIES
It is the responsibility of the college faculty to specify the limits of authorized aid (including but not limited to exams, study aids, internet resources and materials from senior students) in their syllabi, and it is the responsibility of students to honor and adhere to those limits. Course instructors shall inform students at the beginning of the semester of any special criteria of academic honesty pertinent to the class or course.

It is the responsibility of the clinical faculty to provide students with ongoing feedback during rotation upon request. Clinical faculty are generally recommended (though not required) to limit student assigned duty hours from 40 to 60 hours weekly (and not exceeding 60 hours). Both faculty and students are to be treated fairly and professionally in order to maintain a proper working relationship between trainer and trainee.

COURSE GRADES
P-Pass – means that credit is granted and that the student achieved a level of performance judged to be satisfactory according to didactic and clinical performance by the department.
N-No Grade – means that no credit is granted and that the student did not achieve a level of performance judged to be satisfactory according to didactic and clinical performance by the department.
ET-Extended Grade – means that a final grade (“Pass” or “No Grade”) cannot be determined due to one or more missing course requirements. In Years 3 and 4, the ET grade is used instead of an “Incomplete (I)” grade. Once all course requirements have been completed, received, and processed, the ET grade will be changed to a final grade. An “ET” will NOT remain on a student’s transcript.

“N” Grade Policy
Remediation is not offered for Clerkship courses. Any student who receives an N grade in the Clerkship Program will be required to appear before the COSE Clerkship Performance Subcommittee (COSE)
## ROTATION EVALUATIONS

| Attendance/Faculty / Resident Evaluation of Student | Students are responsible for assuring that his/her clinical supervisor receive the appropriate evaluation form. Forms can be found in [insert location of evaluations in D2L] or in the individual D2L Rotation Course. Students should assertively seek feedback on his/her performance throughout the course of the clinical rotation. Students should also sit down and discuss the formal evaluation with the clinical supervisor. Note that the clinical supervisor and the DME from the rotation hospital are required to sign the form. Students should keep a copy of the evaluation and leave the original with the Medical Education Office at the clinical training site where that office will review, sign, and forward the completed form to the Office of Student Services. It is important to know that evaluations will not be accepted by the Office of Student Services if submitted by the student. Any evidence of tampering or modification while in the possession of the student will be considered “unprofessional behavior” resulting in an “N” grade and review by the Committee on Student Evaluation (COSE) and/or the College Heading Committee. |
| Student Evaluation of Rotation | Students will submit their rotation evaluations electronically at the conclusion of every rotation by accessing their online schedule through Kobiljak. |

**IMPORTANT NOTE:** Attending Evaluations do not follow the above “Corrective Action” process. Marginal Attending Evaluations will be reviewed on a case-by-case basis by the department, where the Instructor of Record will then determine whether to give the students a Pass or an N grade for the rotation. If the department determines students will be given an N grade in light of the evaluation, they will then proceed to “N-Grade Policy” process.

**EXPOSURE INCIDENTS PROTOCOL**

A form has been developed by the University to report exposure incidents. These forms will be on file in your DME’s office. You can also access the form at [www.com.msu.edu/AP/clerkship_program/clerkship_documents/exposure.pdf](http://www.com.msu.edu/AP/clerkship_program/clerkship_documents/exposure.pdf). Please make yourself familiar with the procedure and the form.
Clinical Presentation | Experience via patient on rotation | Experience gained via Readings/ modules. (per syllabus)
---|---|---
Acute Abdomen | | |
Fluids and electrolytes | | |
Nutritional support | | |
Postoperative complications | | |
Shock | | |
Burns | | |
Coagulation and transfusion | | |
Hernia | | |
Esophageal disorders | | |
Peptic ulcer disease | | |
Small bowel and appendicular disorders | | |
Colorectal disease | | |
Gall bladder disease | | |
Pancreas disorders | | |
Hepatobiliary disorders | | |
Breast tumors | | |

Surgical endocrinology | | |
Splenic disorders | | |
Skin cancer | | |

<table>
<thead>
<tr>
<th>Date Completed</th>
<th>Procedure</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perform physical exam of acute abdomen</td>
<td>□ Observe □ Assist □ Perform</td>
</tr>
<tr>
<td></td>
<td>Suture/Staple skin incision</td>
<td>□ Observe □ Assist □ Perform</td>
</tr>
<tr>
<td></td>
<td>Peripheral IV insertion</td>
<td>□ Observe □ Assist □ Perform</td>
</tr>
<tr>
<td></td>
<td>Nasogastric Tube insertion</td>
<td>□ Observe □ Assist □ Perform</td>
</tr>
<tr>
<td></td>
<td>Foley catheter insertion</td>
<td>□ Observe □ Assist □ Perform</td>
</tr>
<tr>
<td></td>
<td>Patient teaching (incentive spirometry, drain care, etc.)</td>
<td>□ Observe □ Assist □ Perform</td>
</tr>
</tbody>
</table>

Wellness: An active process of becoming aware of and making choices toward a healthy and fulfilling life.

Have you set one personal wellness goal you would like to accomplish during this rotation?

D Yes
D No

Did you accomplish this goal by the end of the rotation?

D Not at all
D Somewhat
D Completely accomplished goal or exceeded

Student Name: ______________________
Rotation Dates: ____________________
Rotation Site: _____________________
Rotation Attending: ____________________

I participated in interprofessional collaboration (collaboration on patient care with healthcare workers of different professional backgrounds) on this rotation:

□ Yes  □ No

OMM- briefly describe how you used OMM on one patient during this rotation: ____________________

Comments: ____________________