



Achieving New Heights in Medical Education

General Surgery Core Clerkship Curriculum

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RVUCOM General Surgery Core Clerkship Curriculum

Course Faculty

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Surgical Texts

1. Doherty, G. M. (2020). *Current diagnosis & treatment: Surgery* (15th ed.). New York, NY: McGraw-Hill.
2. Course Guide for Surgery (Available in New Innovations.)

The reading requirements will be formally assigned at the beginning of the rotation. General Surgery academic sessions will cover the material assigned for the given week. Even though you may not experience or encounter all of the patient presentations listed in the guide, keep in mind you are responsible for all topics in the guide for testing and educational purposes.

Introduction to the General Surgical Core Clerkship

The General Surgery Clerkship consists of a 1-week on-campus intensive followed by a three-week rotation that will provide clinical exposure to various aspects of surgery. Students will gain knowledge and experience in the diagnosis and management of surgical patients in the inpatient and outpatient clinical settings. It is critical to note that the surgical clinical course is not intended to teach the student everything about surgery or provide the student with clinical experience in every aspect of the discipline. The Clerkship Director and the assigned Preceptor may provide educational guidance, but it is each student's individual responsibility to learn the subject content as outlined in the Course Objectives below. Lifelong self-learning is the ultimate goal and is expected in this core clinical rotation.

The Goals of the General Surgery Clerkship

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 attitudes and ethical behavior**.
6. Develop an **understanding for appropriate timing of referral** for surgical evaluation.

The Objectives of the Surgery Clerkship:

Knowledge (cognitive)

By the end of the general surgery clerkship, the student is expected to have achieved, at a minimum, knowledge of the following surgical subjects through reading, discussion and hands-on experience. All subjects listed below are covered in your surgical textbooks and should be supplemented as needed by clinical experiences, academic sessions, supplemental reading and journal searches, as well as other avenues as directed by your preceptor. Students will take a surgery NBME Subject Exam at the end of the rotation. This test will include questions that cover concepts typical of national board exams.

Surgery Week

Surgery Week Intensive is a comprehensive module designed to provide students with an in-depth understanding of surgical principles, techniques, and practices. Students will gain a solid foundation, along with the confidence to apply their knowledge in the clinical setting. It is structured as a combination of lectures, hands-on workshops, case discussions, and simulation exercises.

Surgery Week Intensive Schedule

- Monday: Overview of the week and introduction to scrubbing, sterile technique, knot tying, suturing and some surgery-related items. Some core surgery topics will be researched in class and discussed in a team-based learning format.
- Tuesday/Wednesday- Case Scenarios – Each student is assigned a patient that is presented during rounds which are performed standing up and evaluated by the attendings. Everyone will have the opportunity to perform “surgery” on a Cut Suit to practice OR technique and sterile procedure. You will rotate through stations including these above for hands on learning. Will also do an Oxford case, NG/Foley and Knot tying (may be done on Monday), and suturing. Three Quizzes over the topics presented in the course (The presentations referenced above cover subjects like preop evaluation, antibiotics, wounds, post op fever and are prepared and presented by the students)
- Thursday- Fourth year pearls, Putting it all together, Instrument Exam, Remaining quizzes (usually 2)
- Friday- Exam which is done remotely.

Formal surgical academic sessions will be held weekly to systematically cover these subjects. Students are required to attend these sessions unless specifically excused by the session instructor.

Surgical Subjects

- A. The Approach to the Surgical Patient
 - a. History taking, utilizing inductive reasoning to establish a diagnosis
 - b. Complete physical exam incorporating necessary special procedures to establish a diagnosis

- c. Laboratory and other examinations in order to screen for asymptomatic disease that may affect or contraindicate surgical intervention, and to evaluate the nature of metabolic or septic complications
- B. The Principles of Surgical Physiology
 - a. Fluid and electrolytes
 - b. Acid-base disturbances
 - c. Coagulation
 - d. Transfusion therapy
 - e. Wound healing
 - f. Nutrition and the surgical patient
 - g. Shock
- C. Essential topics in general surgery
 - a. Wound closure and management
 - b. Surgical tubes and dressings
 - c. Postoperative complications
 - d. Surgical infections
- D. Preoperative evaluation and management
 - a. Identifying preexisting conditions and contributing risk factors
 - b. Medications that may impact surgical decision-making
 - i. (e.g. Coumadin, Plavix, etc.)
 - c. Routine diagnostic testing
 - d. Specific considerations in preoperative management
 - i. Cerebrovascular disease
 - ii. Cardiovascular disease
 - iii. Pulmonary evaluation and screening
 - iv. Renal disease
 - e. Psychological assessment and preparation/ counseling of patient and family
- E. Abdomen
 - a. Acute Abdomen
 - b. Hernias
- F. Gastrointestinal disorders of:
 - a. Esophagus
 - b. Stomach and duodenum, including UGI bleeding
 - c. Small intestine, including intestinal obstruction and fistulae
 - d. Colon, rectum and anus, including LGI bleeding
 - e. Liver, including portal hypertension, and biliary tract
 - f. Pancreas
- G. Endocrine disorders
 - a. Thyroid
 - b. Parathyroid
 - c. Thymus
 - d. Adrenal
 - e. Multiple endocrine neoplasia and tumors of the endocrine
 - f. pancreas
- H. Breast

- a. Evaluation
- b. Benign and malignant lesions and their characteristics
- c. Surgical and medical management of benign and malignant breast diseases
- I. Trauma—including chest trauma and ATLS
 - a. General assessment
 - b. Prioritizing approach to management
 - c. Understanding the various mechanisms of injury
 - d. Physiologic response to injury
- J. Burns—including thermal, electrical and chemical burns
 - a. Assessment of depth of burn
 - b. Management of inhalation injury
 - c. Fluid management
 - d. Wound management
- K. Spleen
 - a. Pathologic conditions
 - b. Surgical approach to various conditions of the spleen
 - c. Complications of splenectomy
- L. Peripheral Vascular Surgery
 - a. Occlusive disease
 - b. Aneurysm
 - c. Venous disease
- M. Thoracic Disorders
 - a. General Principles of thoracic surgery
 - b. Benign and malignant lesions of the chest wall, lungs, mediastinum and heart
 - c. Surgical Management of Congenital and Acquired Cardiac Disease
- N. Head and Neck Surgery
 - a. Benign and malignant lesions of the head and neck, including parotid gland
- O. Subspecialty surgery
 - a. Transplantation Surgery
 - b. Urology
 - c. Plastic and Reconstructive Surgery, including Hand
 - d. Neurosurgery
 - e. Orthopedics
 - f. Pediatric Surgery
 - g. Laparoscopic Surgery
 - h. Ophthalmology
 - i. Gynecology

Skills (Psychomotor)

By the end of the clerkship, the student is expected to have developed proficiency in **basic surgical skills** such as knot-tying, suturing, scrubbing, gowning and gloving and sterile surgical technique.

Problem Solving and Professional Development

By the end of the Clerkship, the student is expected to have achieved a satisfactory level of performance and development in the areas listed on the surgical Clinical Evaluation.

Specifically, the student should demonstrate acceptable levels of achievement in their ability to:

1. Take a history from a surgical patient
2. Conduct a physical examination on a surgical patient
3. Interpret clinical findings to arrive at a surgical diagnosis, a differential diagnosis, and a management plan and be able to comprehensively and concisely present such to the surgical preceptor
4. Develop and maintain complete and concise records of patient problems, including history and physical examination reports, preoperative and postoperative orders and notes and progress notes
5. Develop and give accurate and concise case presentations and surgical subject discussions
6. Develop rapport with patients and showing courtesy and concern for the patient's well being
7. Follow operating room protocol
8. Show evidence of continued professional development by interacting effectively with peers and other health care personnel, taking responsibility for patient care and showing a degree of self-confidence appropriate to his/her level of knowledge
9. Show motivation for learning and achievement by taking responsibility for his/her own learning (reading and other responsibilities), being available and prepared, and showing a consistent warm and caring attitude toward patients and health care personnel
10. Utilize osteopathic principles and techniques as appropriate to the clinical situation

Learning Activities

Reading: The primary surgery textbook chapters dealing with General and Subspecialty Surgery, as outlined above, require reading. These subjects should be supplemented with additional reading from the resource textbooks listed and available to all students through the RVU library online. Additional research on topics of interest and disease states as they present is encouraged from journal and textbook searches.

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. You should make every effort to have your H&Ps and daily progress notes reviewed by your supervisor or by an Intern or Resident.

Scrubbing on Surgeries: Depending on the hospital, you will be a member of the inpatient and/or outpatient surgical team; this is usually based on how many Interns 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 preceptor, reviewing all pertinent studies, x-rays, and lab tests, and examining the patient with the Intern or Resident.

Conferences: Most hospitals have conferences such as morbidity and mortality conference, cancer conferences, and grand rounds. You are expected to attend these when not performing other duties.

Lectures: Lectures on various topics are usually given at noon on most days of the week. They are intended to provide up-to-date information on clinical and research findings and techniques in various fields. They may be given by a guest speaker who is an expert on the topic. If your hospital has a mid-day or other regular lecture program, you are expected to attend.

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.

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 preceptor or an Intern or Resident on your service.

WEEKLY ACADEMIC SESSIONS: **Students are required to attend these sessions unless specifically excused by the session instructor. When a student must be absent from the academic session for any reason, the student must obtain an excused absence from the instructor and email the instructor his/her power point with notes about the session cases.**