

5. Surgery Core Clerkship

Mission and Introduction

To provide a Surgical Curriculum that applies consistently to all clerkship sites in order to include comparable educational experiences and equivalent methods of assessment across all instructional sites and to support a learning environment that fosters professional competence within a culture that prepares students for international medical practice.

To emphasize, review and integrate the student's knowledge of basic scientific information with clinical material to result in favorable educational outcomes in the acquisition of knowledge regarding the etiology, pathophysiology, diagnosis, treatment, and prevention of surgical diseases.

To emphasize to the students the integration of the basic sciences in the development of current clinical knowledge in conjunction with ongoing changes in surgical treatment and technology.

To provide students with the tools for life-long adult learning of surgical diseases for their ongoing professional development.

Guidelines

- Length: 12 weeks
- An orientation at the start of the clerkship should be provided by the Clerkship Director. This should include a discussion of the expectations and responsibilities of the clerk, an overview of the department and facilities of the site, the student schedule and assignments to residency teams and preceptors. The curriculum should be provided as a reference within the orientation process. A review of the Goals and Objectives, Clerkship Guidelines and evaluation process should be conducted.
- Site: predominately general surgical wards with inclusion of ICU, OPD and ED experience as well as those subspecialty experiences that are available. Students must attend operations performed on their patients.
 - The 12-week rotation should include exposure to the subspecialties of urology, anesthesia and orthopedic surgery as well as others that may be available, including ENT and ophthalmology.
 - Students must take night, weekend, and holiday call with their teams.
 - Attending rounds for house staff and students should be conducted at least three times a week.
 - The clerkship must include a schedule of teaching conferences, both in conjunction with and parallel to the educational opportunities of the residents/registrars, including grand rounds, subspecialty conferences and didactic sessions.

Protected Study Time

There should be direct preceptor supervision of the students at least three hours per week to include case presentations by the students with bedside rounds, when appropriate including physical examination and interactive sessions.

A minimum of five clinical write-ups or formal presentations are required. The exercise should be structured to address the development of Clinical Skills through a defined problem solving approach with data gathering based on:

- clinical history,
- physical examination and
- laboratory, imaging and other ancillary studies in order to develop a rank-order differential diagnosis list and concluding with a primary working diagnosis that will direct treatment and/or further investigation.
- Formative feedback on the exercise must be part of the process.
- Electronic patient logs are to be maintained and up to date at all times.
- Electronic patient logs should be periodically inspected by the Program Director and at Mid-rotation in order to monitor the types of patients or clinical conditions that students encounter and modify them as necessary to ensure that the objectives of the education program are met. The patient logs may also be used by the clinical Dean and the Chair of Surgery in order to monitor the types of patients or clinical conditions that students encounter in order to determine if the objectives of the medical education program are being met.

Educational Objectives

Medical Knowledge

- To apply and reinforce knowledge of the basic sciences, especially anatomy and physiology
- To the understanding, presentation and treatment of diseases that are commonly addressed within the field of surgery.
- To identify how and when evidence - based information and other aspects of practice - based learning and improvement affect the care of the surgical patient and the alternatives in management.
- To develop an understanding of the cost to benefit ratio, the role of payment and financing in the healthcare system, the role of multi-disciplinary care including ancillary services such as home-care and rehabilitation and other aspects of systems-based practice in the implementation of the available technologies used in surgical treatment.
- To develop an understanding of the Core Topics (modules listed below) and to apply the associated surgical knowledge to clinical analysis and problem solving.
- To utilize distributive learning through the use of on-line resources for surgical learning and problem-solving.

Clinical Skills

- To apply the principles of surgical practice, including operative and non-operative management, to common conditions.
- To develop and apply the tools of clinical problem solving for surgical conditions including the process of data collection (history, physical examination and laboratory and imaging studies) in establishing a list of differential diagnoses and a primary working diagnosis for treatment and further investigation.
- To identify the importance of and approach to informed consent for surgical operations and procedures, with emphasis on the risks, benefits, and alternatives.
- To identify the importance of interpersonal and communication skills and to apply those skills in the multidisciplinary care of the surgical patient in an environment of mutual respect.
- To demonstrate the ability to conduct proper sterile preparation and technique.

Professional Behavior

- To function as a part of the surgical care team in the inpatient and outpatient setting.

- To demonstrate proper behavior in the procedural setting, including the operating room, at all times.
- To understand the limits of one's position within the surgical care team in order to appropriately engage each patient, their friends and associates and their family.
- To appropriately seek supervision as provided through the hierarchical structure of the surgical care team.
- To identify and respond sensitively to cultural issues that affect surgical decision-making and treatment.
- To develop an understanding of and approach to the principles of professionalism as they apply to surgery through the observation of the role-modeling provided by the surgical faculty.
- Students will be responsible for the review of basic anatomy, pathology and physiology of all surgical problems encountered.
- Students will be responsible for the requirements and recommendations in the Log Book of Manual Skills and Procedures

Evaluations:

In addition to formative feedback given within the daily progress of the 12-week rotation, a defined formative feedback session must be provided by the Program Director (or their designate) at the approximate mid-point of the clerkship.

The patient encounter log should be reviewed at the time of the mid-core session. The mid-core feedback session must be a one-on-one session with each student with completion of the standard form, signed by both the Program Director and the student. Summative evaluation of each student will include the administration of an end-of-core written examination in the form of the National Board of Medical Examiners Subject Examination in Surgery.

In addition to formative feedback given over the course of the 12-week rotation, a defined summative feedback session must be provided by the Program Director (or their designate) at the conclusion of the clerkship.

The final summative feedback evaluation will determine the grade for the clerkship and will be based on several components weighted as follows: 1. Medical Knowledge 2. Patient Care 3. Practice-Based Learning and Improvement 4. Interpersonal and Communication Skills 5. Professionalism and 6. System-Based Practice.

CORE TOPIC GOALS and OBJECTIVES

In addition to general medical knowledge students will be required to demonstrate knowledge in the followed surgical areas that will form the basis for learning within the clerkship.

Module 1: Shock

Module 2: Abdominal Trauma

Module 3: Pediatric Trauma

Module 4: Head Injuries

Module 5: Bowel Obstruction

Module 6: Arterial Vascular Disease

Module 7: Venous Disease

Module 8: Appendicitis

Module 9: Acute Burns

Module 10: Abdominal Wall Hernia

Module 11: Surgery of the Breast

Module 12: Biliary Surgery

Module 13: The Liver, Pancreas, Spleen

Module 14: The Colon, Rectum, and Anus

Module 15: Endocrine Surgery

Module 16: The Stomach and peptic Ulcer Disease

Module 17: Thoracic Surgery

Module 18: Transplant Surgery

Module 19: Bariatric Surgery

Module 20: Surgery in the Elderly

Reading

REQUIRED

Print:

Essentials of General Surgery Lawrence

6th Edition Wolters Kluwer Health, Philadelphia, 2019

RECOMMENDED

Suggested additional print and on-line sources are:

Case Files Surgery, 6th Edition, Lange, McGraw-Hill 2021

Journals:

Journal of the American College of Surgeons

Elsevier

British Journal of Surgery

Wiley-Blackwell

Surgical Organizations:

Student membership in The American College of Surgeons is available through FACS.org, with the support of the Chair of Surgery, and is a well-developed source of educational material for the study of surgery.

WEB BASED EDUCATIONAL ASSIGNMENTS FOR INDEPENDENT LEARNING

The school requires the successful completion of web-based assignments in order to receive credit for this clerkship. Students should log into their portal to see these assignments. The Clinical Science department monitors student performance on these assignments. The clinical faculty feels these assignments are excellent preparation for the NBME clinical subject exams as well as Step 2.