The Florida State University
College of Medicine

BCC 7160

Surgery Clerkship

2016-2017

Revised 12/22/16 to add new Education Director

Table of Contents

Instructors

Education Director

SUMMER AND FALL 2016

Edward L. Bradley III. M.D., FACS

Office FSU College of Medicine

201 Cocoanut Ave

Sarasota, FL 34236-4917

Phone 941-587-7560

Email ed.bradley@med.fsu.edu

SPRING 2017

Michael Sweeney M.D., FACS

Office FSU College of Medicine

1115 West Call Street – Room 3140-G

Phone 850-645-9855

Email michael.sweeney@med.fsu.edu

Clerkship Directors

Campus	Director
Fort Pierce	Kenneth Bridges M.D.,FACS
Daytona	Harry Black M.D., FACS
Orlando	Timothy Childers M.D.,FACS
Pensacola	John Tyson M.D., FACS
Sarasota	Steven Halbreich M.D., FACS
Tallahassee & Thomasville	Richard Zorn M.D., FACS
Marianna Site	Steven Spence M.D.

Course Overview

Surgery is a six week experience in the care of patients suffering from conditions that are amenable to treatment by the use of the hand (surgery; fr. Greek: cheir [hand] and ergon [work], literally `handiwork`). Students will be assigned to an individual General Surgery clerkship faculty member for six weeks who will shepherd the student experience in the operating room, out-patient clinics, and office based practice. Students will have the opportunity to work one-half day with an anesthesiologist to learn airway management. It is the student's responsibility to contact the Department of Anesthesia to arrange this.

Major emphasis in this rotation will be placed upon issues and problems in General Surgery, but *student familiarity with common problems in the surgical subspecialties (thoracic and cardiovascular, orthopedics, urology, otolaryngology, and neurosurgery) is also tested on the end-of-clerkship NBME clinical subject examination.*

The majority of time that the student spends on the Surgery Clerkship will be spent as an apprentice to a surgeon from the clerkship faculty. This contact will provide the student with an appreciation of what a practicing community surgeon does, both in the operating room and in out-patient settings. In addition, each student will have weekly scheduled contacts with the Surgery Clerkship Director, who will oversee E*Value entries, in order to provide breadth and depth of patient experience, avoid duplication, and assure compliance with clerkship objectives. Case-based didactic sessions will be held weekly with the Clerkship Director. Students will take night call twice per week during the second, third, fourth and fifth weeks of the clerkship and will be expected to be a part of any surgical admission or procedure occurring during their time on call. The work week will consist of Monday through Saturday (inclusive). Note that students must adhere to the ACGME rules regarding the workweek, which include working no more than 80 hours per week, no more than 24 hours continuously, except an additional 6 hours may be added to the 24 to perform wrap-up duties, and have at least one of every 7 days completely off from educational activities.

The keys to success during this rotation lie principally in two areas: (1) Enthusiastic attendance at all clinical functions, and (2) A daily text reading program covering not only the clinical encounters of the day, but also that daily amount of text necessary to complete the core material by the end of the clerkship. The required texts are listed below.

Student Self-Study Program

A self-study program has been designed to assist the student in addressing the core course **content** **(see Appendix)** from among the vast amount of surgical information available. While you are certainly free to design your own learning program, adherence to this program will result in exposure to the core material and breadth of knowledge deemed necessary for students to have acquired during this clerkship. The Mann text *Surgery: A Competency-Based Companion* (described below) will provide you with the opportunity to make the most of your surgical experience. As you are an adult learner, and beyond the spoon-feeding stage, it will be up to you to decide how many chapters in the required text should be read each week. This suggested self-study program is designed for you to complete reading the text by the end of the course. Following this program will favorably position you to take a tough end-of-clerkship NBME exam, that is comprehensive, timed, and has a significant failure rate.

The suggested reading program in Surgery: A Competency-Based Companion is as follows:

Week 1: Chapters 1-10, Introduction

Week 2: Chapters 11-19, Abdominal Pain

Week 3: Chapters 20-31, Surgical Oncology

Week 4: Chapters 32-41, Vascular Surgery, GI Bleeding

Week 5: Chapters 42-55, Post-Operative Care, Trauma

Week 6: Chapters 56-81, Bariatrics, Cardiothoracic, Pediatric Surgery, Transplantation, and SICU

When the reading program is completed, the student will have achieved familiarity with those Topics and Sub-topics listed in the **Appendix**, that constitute the core material for Surgery

When first confronted by Surgery, many students see only the technical side; i.e., the procedures done in the operating room. While surgical technique is unquestionably important, of equal importance to the results from operative surgery are preoperative preparation (including diagnosis and workup), and postoperative care. NOTE WELL: THE NBME CLINICAL SUBJECT EXAM DOES NOT TEST YOUR KNOWLEDGE OF SURGICAL TECHNIQUE! Rather, this examination concentrates on establishing a diagnosis (45-50%), principles of management (25-30%), nutritional and digestive diseases (25-30%), and understanding mechanisms of disease (15-20%). Much of the exam is in clinical vignette form, in which you will be given data and expected to come to a diagnosis, order additional tests, or pick a therapy. Many students have seen only the drama of the operating room, failing to see this “medical” side of Surgery, and have therefore felt that the exam is “almost all medicine”. Don’t make that same mistake! The best surgeons are “Internists with Operating Privileges”!

This exam tests the application and integration of knowledge, rather than the recall of isolated facts. For these reasons, you cannot just study isolated facts, or cram at the last minute. You need to be on a schedule of programmed reading *throughout the clerkship* if you wish to be successful.

Required Reading Materials

The suggested text for this course will be "Surgery: A Competency-Based Companion" by Barry D. Mann, Saunders/Elsevier, Philadelphia, 2009. This text is available through the Maguire Medical Library. Following the reading program listed above in this text will favorably position you for the tough end-of-service examination.

Core Material

Listed in the Appendix are those Topics that are considered the Core Information for Surgery, and for which students will be held accountable. You are responsible for choosing how, and from where, you will acquire this knowledge base. Although there are a number of excellent surgical texts available, the Mann text is the shortest, while offering authoritative material. Blackbourne's Surgical Recall is considered helpful by many. For review immediately prior to the NBME exam, I wholeheartedly recommend Doherty's "Current Diagnosis and Treatment: Surgery". Individual topics are outlined and all pertinent information is provided on one page. Other students swear by the DeVirgilio surgery text, and Dr. Pestana's Notes. Regardless of which text(s) you choose, make certain that you have mastered those *subtopics* listed in the Appendix, as they are important and appear with great frequency on examinations.

Students will be responsible for the material in "Cope`s Early Diagnosis of the Acute Abdomen", 21st Ed., edited by Silen, W., Oxford University Press, New York, 2005. This is one of the most highly regarded books in all of medicine, and mastery of the material contained herein will remove all mystery from the diagnosis of abdominal pain. Regardless of your eventual specialty, if you are in clinical medicine, you will see patients with abdominal pain. It is available online from the COM library.

For those students wishing to pursue a surgical career, the latest edition of "Sabiston Textbook of Surgery", edited by Townsend, CM Jr., W. B. Saunders, Phila., is recommended. Choosing this option, however, will significantly increase your reading time, as topics are considered in great detail. "The Physiologic Basis of Surgery", 4th Ed., edited by O`Leary, J.P., Lippincott Williams & Wilkens, Phila., 2008, is a requisite for anyone contemplating becoming a surgeon. Although primarily designed for surgical residents facing the yearly American Board of Surgery In-Site Training Examination (ABSITE), it represents an outstanding review of physiology for non-surgeons as well.

"Controversies in Surgery" Paper

In order to familiarize you with the lifelong importance of evidence-based medicine in determining best clinical practice, and to assist you with how and where to collect evidence-based data, each student will also be responsible for writing a 1000 word paper (MS-Word, three pages, *double-spaced*, not including references, consisting of the following:

a. Identify a controversial problem in Surgery that interests you.

b. Present the pro and con *evidence-based* data with full references

c. Form your own conclusion and justify your position.

The paper is ***not*** intended to be a re-statement of a book chapter, in which there is extensive discussion of the Background of the issue, and a description of the application of a Surgical Technique. Rather, you are to: (1) briefly state the nature of the controversy you have identified (one paragraph or less), (2) collect high level evidence-based data from the literature (not opinions), (3) incorporate the actual data into the paper (not the summaries and conclusions of referenced authors), and (4) reach a conclusion based upon the specific data that you included in your exposition. There should be enough evidence based data recorded in your paper to convince a third party of the validity of your conclusions. It is insufficient to KNOW the correct conclusion, your data and analysis must PROVE it! If you need a review of what evidence-based data is, and the hierarchy of validity, please review the topic by clicking here (EBM).

NOTE: This paper is due ***prior*** to the NBME Clinical Subject examination on the last day of the rotation. **Late papers will not be accepted.** ***Failure to adhere to the following procedure for the submission of the paper will lead to an IR , with possible reduction in grade, and/or the necessity to write another paper!***

Papers MUST be uploaded to the Student Academics Project Documents AND to Blackboard to be **checked against a computerized registry ("Safe Assign") for similarities to other papers in content and expression. When you submit your paper to the Student Academic web site, you are attesting that it is your own work.** You may send your paper to whomever else you wish, but you MUST submit to the Student Academic web site. It will be time and date stamped there.

*E*Value Data Entry Policies for Surgery*

Categorization of extent of patient contact may be somewhat different on Surgery compared to other rotations. In general, the three categories of contact are:

- **Full:** focused H & P, AND participate in plans for workup/therapy (i.e., scrub on patient, discuss diagnosis and treatment with attending, etc.), AND follow.
- **Minimal:** brief contact, usually less than 10 minutes (look at x-rays, or lesion, etc.)
- **Moderate:** everything else

All surgical procedures done under general anesthesia are to be assigned to the "major" category. Please note that the same patient should not be entered more than twice (including Post-Operative visits) unless a new problem has developed. The rationale is that while I am interested in your workload, I am even more interested in your breadth of experience.

All entries **must** be completed within 48 hours of completing the course in order to avoid concerns about professionalism.

Patient Encounters Required to Meet Course Objectives

The following guidelines are offered to suggest the types and *minimal numbers* of patients to be encountered by students on the Surgery rotation in order to meet the objectives stated above: Failure to meet this minimal number will result in an IR, and additional assignments necessary in order to pass the course. However, students entering just minimally acceptable numbers of patient contacts will not qualify for consideration of Honors!

a. total number of patients encountered – 110, including 30 major operations
b. gastrointestinal disease – 40
c. general surgical patients exclusive of GI disease – 20
d. oncology – 20
e. procedures – minimum of 20 (including wound suturing (10), Foley and nasogastric tube placemen (one each), , and endotracheal intubation (at least 1)

REPEAT: Failure to enter the required number of patient contacts or procedures as specified above may result in a lowering of your grade and additional requirements before a final grade can be determined.

Competencies-Objectives-Assessment

COM Competencies

a) Patient Care	b) Medical Knowledge	c) Practice-based Learning
d) Communication Skills	e) Professionalism	f) Systems-based Practice

Course Objectives

By the completion of the Clerkship, the student will be expected to be able to:

1. Demonstrate familiarity with “core surgical knowledge”, as described in the Syllabus, including commonly encountered problems in Orthopedics, Urology Otolaryngology, Thoracic/Cardiovascular, and Neurosurgery (Competencies a, b)
2. Conduct a focused medical history, targeted physical examination, and create a meaningful differential diagnosis for surgical conditions (a, b)
3. Recognize an acute surgical abdomen, and identify its probable cause (a, b)
4. Exhibit the capability to provide concise and logical patient presentations (a, b, d)
5. Develop familiarity with suturing wounds, bladder catheterization, and airway management (a)
6. Demonstrate proficiency in: scrubbing and maintaining sterile technique, dressing clean and contaminated wounds, wound closure with sutures/staples, drain management, wound debridement, and operative assistance. (a, b)
7. Appreciate ethical, cultural, and public health issues in Surgery, including traditionally underserved populations, and oversight of surgical practice at the local, state, and Federal levels (a, c, d, e, and f)
8. Exhibit facility in applying informatics to critical appraisal of the surgical literature, and to making surgical diagnostic and therapeutic decisions. (a, b, c, e)
9. Be familiar with common anesthetic agents, their administration, recovery from their usage, and develop facility with airway management. (a, b,)
10. Effectively and respectfully communicate with colleagues, staff, patients, and families, emphasizing patient centered care (a, d, e, and f)

Assessment of Competencies (Grading)

The standardized clerkship grading policy can be found on the Office of Medical Education syllabi web page. Satisfactory student acquisition of these above listed competencies will be assessed by Clerkship Faculty, the Clerkship Director, and the Education Director. In addition to the clinical evaluation of medical knowledge, the end-of-clerkship NBME examination will also be used to assess the depth of the student's medical knowledge. Student evaluation is a result of 360 degree clinical and professionalism evaluations by clerkship faculty and clerkship directors, patient and staff evaluations, the evidence-based paper project, and the NBME exam Evaluation materials will be collated by the Education Director, and a final grade submitted that encompasses each of the evaluation metrics. An Honors grade requires excellence in each of these areas.

Policies

Americans with Disabilities Act

Candidates for the M.D. degree must be able to fully and promptly perform the essential functions in each of the following categories: Observation, Communication, Motor, Intellectual, and Behavioral/Social. However, it is recognized that degrees of ability vary widely between individuals. Individuals are encouraged to discuss their disabilities with the College of Medicine's Director of Student Counseling Services and the FSU Student Disability Resource Center to determine whether they might be eligible to receive accommodations needed in order to train and function effectively as a physician. The Florida State University College of Medicine is committed to enabling its students by any reasonable means or accommodations to complete the course of study leading to the medical degree.

The Office of Student Counseling Services
Medical Science Research Building G146
Phone: (850) 645-8256
Fax: (850) 645-9452

This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center

874 Traditions Way

108 Student services Building

Florida State University
Tallahassee, FL 32306-4167
Voice: (850) 644-9566

TDD: (850) 644-8504
sdrc@admin.fsu.edu

Academic Honor Code

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. (Florida State University Academic Honor Policy

Attendance Policy

The College of Medicine has detailed attendance policies as they relate to each cohort and events that conflict with course schedules See FSUCOM Student Handbook for details of attendance policy, notice of absences and remediation.

Library Policy

The COM Maguire Medical Library is primarily a digital library that is available 24/7 through secure Internet access. Library resources that support this course are available on the Surgery Subject Guide on the Library website. In addition, many of the point-of-care resources are available for full download to mobile data devices. Upon student request, items not found in the library collection may be borrowed through interlibrary loan.

Longitudinal Integrated Curriculum (LIC)

General information and policy regarding the Longitudinal Integrated Curriculum (LIC) in Marianna can be found on the syllabi page of the Office of Medical Education website. The Surgery Clerkship Blackboard site also has a content area with specific dates and deadlines for the Surgery clerkship that will be presented in either the first half of the year from July 5 – November 4 or the second half of the year from November 7 to March 31, with 1 formative assessment at the mid point.

APPENDIX

Listed below are the General Topics for which you will be held responsible, Included within each General Topic are several Subtopics that have proved to be of frequent interest to test-writers. Once you have mastered the information included in the larger General Topic, make certain that you are familiar with the Subtopics as well.

1) Preoperative and Postoperative Care

Subtopics: nutritional assessment, immunocompetence, infection risks, factors affecting wound healing, respiratory failure

2) Postoperative Complications

Subtopics: fat embolism, aspiration, myocardial infarction, cardiac failure, gastric dilatation, wound dehiscence, geriatric problems, such as delirium, dementia, and the propensity to fall.

3) Special Medical Problems in Surgical Patients

a) *Endocrine Disease in the Surgical Patient*

Subtopics: diabetes, hyperparathyroidism, hypothyroidism, adrenal insufficiency

b) *Heart Disease and the Surgical Patient*

Subtopics: coronary artery disease

c) *Renal Disease and the Surgical Patient*

Subtopics: renal failure

d) *Hematologic Disease*

Subtopics: surgery in patients with hematologic malignancies and/or receiving anticoagulants, disorders of hemostasis; coagulation factor concentrates.

4) Wound Healing

Subtopics: biochemistry of healing; factors retarding healing

5) Inflammation, Infection, and Antibiotics

Subtopics: infection risk factors, necrotizing infections, antibiotic colitis, tetanus, rabies, venomous bites.

6) Fluid and Electrolyte Management

Subtopics: know this chapter cold; particularly acid-base balance! If given values for HCO3, pH, PaCO2 you must be able to identify acidosis/alkalosis, metabolic/respiratory, compensated/uncompensated states.

7) Surgical Metabolism and Nutrition

Subtopics: complications of parenteral nutrition, desirability of enteral nutrition

8) Anesthesia

Subtopics: nerve injuries due to malpositioning, complications of anesthesia

9) Shock and Acute Pulmonary Failure

Subtopics: cardiac compressive shock, cardiogenic, neurogenic, and septic shock, ARDS, fat embolism, pulmonary embolism.

10) Management of the Injured Patient

Subtopics: tension pneumothorax, flail chest, aortic rupture, arteriovenous fistula, liver/pancreas injuries.

11) Burns and Other Thermal Injuries

Subtopics: burn complications, heat stroke, frostbite.

12) Head and Neck Tumors

Subtopics: salivary gland tumors, squamous cell cancers.

13) Thyroid and Parathyroid

Subtopics: evaluation of thyroid nodules, thyroid carcinoma, hypercalcemic crisis, secondary hyperparathyroidism.

14) Breast

Subtopics: Paget`s disease (including clinical appearance), carcinoma during pregnancy and lactation, non-invasive carcinoma, nipple discharge

15) Thoracic Wall, Pleura, Mediastinum, and Lung

Subtopics: chylothorax, mesothelioma, superior vena cava syndrome, solitary pulmonary nodule, myasthenia gravis.

16) The Heart

Subtopics: Acquired Heart Disease: valvular disease, aortic dissection

Congenital Heart Disease: VSD, transposition, tetralogy, PDA, coarctation.

17) Esophagus and Diaphragm

Subtopics: achalasia, scleroderma, Zenker`s diverticulum, GERD, Boerhaave`s syndrome, diaphragmatic hernias.

18) The Acute Abdomen

Subtopics: you learned all of this when you read Cope

19) Peritoneal Cavity

Subtopics: pseudomyxoma, retroperitoneal fibrosis, workup of abdominal masses

20) Stomach and Duodenum

Subtopics: gastrinoma, volvulus, Mallory-Weiss, MALT tumors, GI bleeding

21) Liver and Portal Venous System

Subtopics: hepatoma, hepatic metastases, hepatic adenoma, Budd-Chiari, splenic vein thrombosis

22) Biliary Tract

Subtopics: gallstone ileus, cholangitis, emphysematous cholecystitis

23) Pancreas

Subtopics: cystic neoplasms, islet cell tumors, pancreatic ascites/effusion, adenocarcinoma

24) Spleen

Subtopics: hereditary spherocytosis, ITP, TTP, post-splenectomy sepsis, myeloid metaplasia

25) Appendix

Subtopics: know this chapter!

26) Small Intestine

Subtopics: blind loop syndrome, mesenteric occlusion, carcinoid tumors, Crohn`s disease.

27) Large Intestine

Subtopics: polyps, volvulus, colitis.

28) Anorectum

Subtopics: rectal prolapse, rectal fissure, fistula-in-ano, pilonidal cyst

29) Hernias and Other Lesions of the Abdominal Wall

Subtopics: femoral hernia, obturator hernia

30) Adrenals

Subtopics: primary aldosteronism, pheochromocytoma, incidentalomas, Cushings.

31) Arteries

Subtopics: embolism, visceral aneurysms, thoracic outlet syndrome, renovascular hypertension, cerebrovascular disease

32) Veins and Lymphatics

Subtopics: deep vein thrombosis, thromboembolism, lymphedema

33) Neurosurgery and Surgery of the Pituitary

Subtopics: subdural and epidural hemorrhage, meningiomas, ateriovenous malformations, trigeminal neuralgia

34) Otolaryngology

Subtopics: facial nerve paralysis, vocal cord paralysis, inflammatory neck masses.

35) The Eye and Ocular Adnexa

Subtopics: glaucoma, retinal detachment, corneal abrasion, perforation

36) Urology

Subtopics: calculi, renal carcinoma, prostatic and testicular carcinomas

37) Gynecology

Subtopics: ectopics, cervical carcinoma, carcinomas of the uterus and ovary, molar pregnancy, endometriosis

38) Orthopedics

Subtopics: compartment syndromes, Morton`s toe, hip fractures, lumbar discs

39) Plastic and Reconstructive Surgery

Subtopics: basal cell, melanoma, and squamous carcinomas

40) Hand Surgery

Subtopics: nerve injuries, hand space infections, carpal tunnel syndrome

41) Pediatric Surgery

Subtopics: thyroglossal and branchial cysts, Hirschsprungs disease, Wilms tumor, neuroblastoma, esophageal atresia, undescended testicle

42) Oncology

Subtopics: sarcomas, Hodgkins, paraneoplastic syndromes, breast and colon chemotherapy

43) Organ Transplantation

Subtopics: histocompatibility testing, pharmacology of immunosuppressive drugs