



BCC 7160 Surgery Clerkship 2019-2020

Education Director

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Overview

Description

Students will participate in this clerkship as either a 6-week block or through the Longitudinal Integrated Curriculum (LIC). The Surgery Clerkship 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; from the Greek: *cheir* [hand] and *ergon* [work], literally “handiwork”). Students will be assigned to an individual General Surgery clerkship faculty member who will shepherd the student experience in the operating room, outpatient clinics, and office-based practice. This contact will provide the student with an appreciation of what a practicing community surgeon does, both in the operating room and in outpatient settings.

The 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 (i.e. thoracic, cardiovascular, orthopedics, urology, otolaryngology, and neurosurgery) is also tested on the end-of-clerkship NBME Clinical Subject Examination. 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 make arrangements.

Orientation and Syllabus Review

The keys to success during this rotation lie principally in these two areas:

- Enthusiastic attendance at all clinical functions. 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.
- Preparation for operative case participation, including anatomical review, is important to maximize the learning opportunities presented. Recommended resources include surgical atlases which are invaluable as pre-operative resources.

Students are required to review the syllabus prior to the first day of the clerkship. In addition to review of the syllabus, students may be asked to meet the Clerkship Director for a general orientation. A site-specific orientation will occur at the assigned clinical site prior to or at the initiation of clinical activities. Students are responsible for communicating with Clerkship Faculty prior to the start date of the clerkship.

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.

Scheduled Hours/On-Call

Students will take night calls twice per week during 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). During off-cycle rotations during which Doctoring 3 is not scheduled, students will work 5 or more days per week with Clerkship Faculty.

Student Workhour Policy and Documentation

The FSU College of Medicine adheres to the ACGME requirements regarding clinical work and education. This includes working no more than 80 hours per week and no more than 24 hours continuously, except an additional 4 hours may be added to the 24 to perform activities related to patient safety, such as transitions of care or education. Additional patient care responsibilities must not be assigned during this time. Students will have at least one out of every 7 days off, completely free from clinical and educational duties, when averaged over 4 weeks.

Students will use the [Encounter Tracking System \(ETS\)](#) to document by self-reporting their daily work hours. Students must enter daily work hours that includes both clinical experience (includes clinical care and documentation in medical record) and assigned educational activities (Doctoring 3 didactics, clerkship meetings, educational meetings at residency programs). Failure to report work hours is considered a breach of professionalism.

Hours that **should not be included in self-reported work hours** include reading about patient conditions and procedures, self-directed study for clerkships/courses, work completed for assignments, learning modules and assigned

reading.

Absences

Extended absences from the clerkship are not permitted. Any absence from the clerkship must be **pre-approved by the regional Campus Dean** prior to the beginning of the clerkship, using the [student absence request form](#). Even with an excused absence, the student will complete the scheduled work as outlined.

The Clerkship Faculty, Clerkship Director and Education Director must be notified of any absence in advance by the student. In the case of illness or other unavoidable absence, follow the same procedure outlined above, and notify everyone as soon as possible. **Unapproved absences during the clerkship will result in a grade of “incomplete” until remediated, and may result in a grade of “fail” for the clerkship.**

Components

Assignment: Evidence-Based Controversies in Surgery Paper

The purpose of this assignment is to familiarize students with the lifelong importance of evidence-based medicine in determining best clinical practice and to assist with how and where to collect evidence-based data. The scope of the paper must identify a controversial problem in Surgery that interests the student. Students will present the pro and con of the *evidence-based* data with full references; students will form their own conclusion and justify their position. The paper will be three-pages long (double-spaced) at 1,000-words, not including references. This assignment is not intended to be a restatement 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. 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 [Evidence-Based Medicine Tutorial](#).

Students must complete all of the following:

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)
 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.
- **Submission Guideline:** Students will submit this assignment as a Microsoft Word document, to be uploaded into Student Academics by 5 p.m. on Friday of the LAST week of the clerkship. *If the site is not available for any reason, then the paper needs to be emailed directly to Dr. Sweeney, the Education Director.*

WISE-MD Online Modules

Students are **required** to complete the **six (6) topic modules** listed below, from the [Aquifer WISE-MD](#) virtual patient online learning site. There are 22 Case Modules in all, and 16 Skills Modules, and students are encouraged to complete all modules. Students **must complete** the following modules:

1. Abdominal Aortic Aneurysm
2. Carotid Stenosis
3. Pediatric Hernia
4. Thyroid Nodule
5. Trauma Resuscitation
6. Venous Thromboembolism

Patient Care

Students are **required** to provide **comprehensive surgical care across the continuum** for **3-6 patients** during the clerkship. This includes following a patient pre-surgery, participating in the surgery and their post-operative care. Comprehensive care includes initial consultation, history and physical, assessment of comorbidities and surgical risk, patient education, informed consent, interprofessional communication, scrub case, post-operative planning with patient care, as well as discharge coordination. Documentation of this educational activity in ETS is required, in addition to documenting the patient encounter data for each phase of participation.

Patient Log (ETS)

Students must record a minimum of **110 patient encounters in the Encounter Tracking System (ETS)** during the Surgery Clerkship to include:

Procedures

- 30 major surgical procedures/operations conducted under general anesthesia
- 3 to 6 continuum patients as described in the Patient Care section above
- 10 wound repair or wound suturing
- 2 Foley urinary catheter placement of at least one female and one male
- 3 participation in airway management or intubation
- 5 general surgery

Problems

- 40 gastrointestinal disease
- 20 general (non-GI) surgical
- 20 oncology

All entries must be completed by 5PM on the last day of the course in order to avoid concerns about professionalism. Failure to record the minimum number of patient encounters by the end of the clerkship will result in an initial grade of "IR" and clinical remediation may be required; noncompliance with recording patient encounters may result in a failing grade for the clerkship.

Level of participation in patient care is determined by the effort a student puts forth during the data-gathering phase, assessment and development of a treatment plan. Typically, the data-gathering phase includes history, physical examination and review of diagnostic tests available. The assessment phase includes creating a problem list, as well as developing a prioritized differential diagnosis for a problem. The treatment plan includes therapeutics, diagnostic evaluation, patient education and follow-up. The complexity of these components will vary, but for the purposes of choosing a level of participation, three basic tasks have been created. These include gathering history, performing a physical exam (full or focused/targeted), and developing assessment and plan of care. For "Level of Participation in Patient Care" the levels have been defined as follows:

- Minimal: perform one of the aforementioned tasks (either history or physical)
- Moderate: perform two of the aforementioned tasks (both history AND physical)
- Full: perform all three tasks

Meetings and Lectures

Each student will have weekly scheduled contacts with the Surgery Clerkship Director, who will oversee patient log 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.

End of Clerkship Exam

On the last day of the clerkship, students will take the NBME Clinical Subject examination. This exam does not test your knowledge of surgical technique, but instead concentrates on establishing a diagnosis (40-50%), principles of management (25-30%), nutritional and digestive diseases (25-30%), and understanding the 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 choose a therapy. 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 to be successful. 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!

There are NBME self-assessment tools available by request to your Student Support Coordinator.

Learning Resources

Readings

A **self-study program** has been designed to assist students in addressing the core course content from among the vast amount of surgical information available. Students may design their own learning program, adherence to this program will result in exposure to the core material and breadth of knowledge deemed necessary for this clerkship.

The textbook described below provides students with the opportunity to make the most of the surgical clerkship experience. As adult learners it will be up to you to decide how many chapters in the required text should be read each week. The suggested self-study program is designed for you to complete the readings by the end of the clerkship. Following this program will favorably position students to take the tough end-of-clerkship NBME Clinical Subject Exam.

The suggested reading program of the online textbook [Surgery: A Case Based Clinical Review](#) by Christian de Virgilio; Paul N. Frank; Areg Grigorian 2015, is:

- Week 1: [Part I: Acute Care Surgery](#)
- Week 2: [Part II: Breast](#) and [Part III: Cardiothoracic](#)
- Week 3: [Part IV: Endocrine](#)
- Week 4: [Part V: Head and Neck](#)
- Week 5: [Part VI: Hepatopancreaticobiliary](#)
- Week 6: [Part VII: Lower Gastrointestinal](#)

When the reading program is completed, the student will have achieved familiarity with those topics and subtopics listed in the table below, which 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 the surgical technique is unquestionably important, of equal importance to the results from operative surgery are preoperative preparation (including diagnosis and workup) and postoperative care.

Listed below are the General Topics for the Core Content 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.

	MAIN TOPIC	SUBTOPICS
1	Preoperative and Postoperative Care	nutritional assessment, immunocompetence, infection risks, factors affecting wound healing, respiratory failure
2	Postoperative Complications	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) <i>Endocrine Disease</i>	diabetes, hyperparathyroidism, hypothyroidism, adrenal insufficiency
	b) <i>Heart Disease</i>	coronary artery disease
	c) <i>Renal Disease</i>	renal failure
	d) <i>Hematologic Disease</i>	surgery in patients with hematologic malignancies and/or receiving anticoagulants, disorders of hemostasis; coagulation factor concentrates.
4	Wound Healing	biochemistry of healing; factors retarding healing
5	Inflammation, Infection, and Antibiotics	infection risk factors, necrotizing infections, antibiotic colitis, tetanus, rabies, venomous bites
6	Fluid and Electrolyte Management	acid-base balance, if given values for HCO ₃ , pH, PaCO ₂ you must be able to identify acidosis/alkalosis, metabolic/respiratory, compensated/uncompensated states
7	Surgical Metabolism and Nutrition	complications of parenteral nutrition, the desirability of enteral nutrition
8	Anesthesia	nerve injuries due to malpositioning, complications of anesthesia
9	Shock and Acute Pulmonary Failure	cardiac compressive shock, cardiogenic, neurogenic, and septic shock, ARDS, fat embolism, pulmonary embolism

10	Management of the Injured Patient	tension pneumothorax, flail chest, aortic rupture, arteriovenous fistula, liver/pancreas injuries
11	Burns and Other Thermal Injuries	burn complications, heat stroke, frostbite
12	Head and Neck Tumors	salivary gland tumors, squamous cell cancers
13	Thyroid and Parathyroid	evaluation of thyroid nodules, thyroid carcinoma, hypercalcemic crisis, secondary hyperparathyroidism
14	Breast	Paget's disease (including clinical appearance), carcinoma during pregnancy and lactation, non-invasive carcinoma, nipple discharge
15	Thoracic Wall, Pleura, Mediastinum, and Lung	chylothorax, mesothelioma, superior vena cava syndrome, solitary pulmonary nodule, myasthenia gravis
16	Heart	Acquired Heart Disease: valvular disease, aortic dissection Congenital Heart Disease: VSD, transposition, tetralogy, PDA, coarctation
17	Esophagus and Diaphragm	achalasia, scleroderma, Zenker's diverticulum, GERD, Boerhaave's syndrome, diaphragmatic hernias
18	The Acute Abdomen	you learned all of this when you read the Cope text
19	Peritoneal Cavity	pseudomyxoma, retroperitoneal fibrosis, workup of abdominal masses
20	Stomach and Duodenum	gastrinoma, volvulus, Mallory-Weiss, MALT tumors, GI bleeding
21	Liver and Portal Venous System	hepatoma, hepatic metastases, hepatic adenoma, Budd-Chiari, splenic vein thrombosis
22	Biliary Tract	gallstone ileus, cholangitis, emphysematous cholecystitis
23	Pancreas	cystic neoplasms, islet cell tumors, pancreatic ascites/effusion, adenocarcinoma
24	Spleen	hereditary spherocytosis, ITP, TTP, post-splenectomy sepsis, myeloid metaplasia
25	Small Intestine	blind loop syndrome, mesenteric occlusion, carcinoid tumors, Crohn's disease
26	Large Intestine	polyps, volvulus, colitis
27	Anorectum	rectal prolapse, rectal fissure, fistula-in-ano, pilonidal cyst
28	Hernias and Other Lesions of the Abdominal Wall	femoral hernia, obturator hernia
29	Adrenals	primary aldosteronism, pheochromocytoma, incidentalomas, Cushing's
30	Arteries	embolism, visceral aneurysms, thoracic outlet syndrome, renovascular hypertension, cerebrovascular disease
31	Veins and Lymphatics	deep vein thrombosis, thromboembolism, lymphedema
32	Neurosurgery and Surgery of the Pituitary	subdural and epidural hemorrhage, meningiomas, arteriovenous malformations, trigeminal neuralgia
33	Otolaryngology	facial nerve paralysis, vocal cord paralysis, inflammatory neck masses
34	Eye and Ocular Adnexa	glaucoma, retinal detachment, corneal abrasion, perforation
35	Urology	calculi, renal carcinoma, prostatic and testicular carcinomas
36	Gynecology	ectopics, cervical carcinoma, carcinomas of the uterus and ovary, molar pregnancy, endometriosis
37	Orthopedics	compartment syndromes, Morton's toe, hip fractures, lumbar discs
38	Plastic and Reconstructive Surgery	basal cell, melanoma, and squamous carcinomas
39	Hand Surgery	nerve injuries, hand space infections, carpal tunnel syndrome
40	Pediatric Surgery	thyroglossal and branchial cysts, Hirschsprung's disease, Wilms tumor, neuroblastoma, esophageal atresia, undescended testicle
41	Oncology	sarcomas, Hodgkin's, paraneoplastic syndromes, breast, and colon chemotherapy
42	Organ Transplantation	histocompatibility testing, pharmacology of immunosuppressive drugs

Electronic Resources

Students may access the [COM Charlotte Edwards Maguire Medical Library](#) for additional resources and are encouraged to reference the [Surgery Subject Guide](#).

- *Surgical Recall* by Lorne H. Blackbourne, 2014
- *Current Diagnosis and Treatment: Surgery* by Gerard M. Doherty, 2015
- *First Aid for the Surgical Clerkship* by Nitin Mishr; Latha Ganti; Matthew Kaufman, 2016
- *Shelf-Life Surgery* by Stanley Zaslau, 2014
- *Cope's Early Diagnosis of the Acute Abdomen* by William Silen, 2010
- *Sabiston Textbook of Surgery* by Courtney M. Townsend; R. Daniel Beauchamp; B. Mark Evers; Kenneth L. Mattox, 2016
- *Essentials of General Surgery and Surgical Specialties* by Peter Lawrence, 6th Edition, 2019

Modules

Students have access to 22 case modules and 16 skill modules from the [Aquifer WISE-MD](#) virtual patient online learning site. Requirements are listed in the components section.

Institutional Resources

The [COM Charlotte Edwards 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 under "Subject Guides" under the *Resources by subject* from the main menu 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.

Evaluation and Grading

Mid-Clerkship Feedback

The mid-clerkship evaluation is completed at the mid-point of the Clerkship by the Clerkship Director and will provide feedback to the student on progress in the clerkship. This will include progress toward achievement of clerkship objectives, competencies, assignments and required encounters.

Encounter data are monitored by the Clerkship Directors to assure that students are meeting clerkship requirements. If it becomes apparent that a student is not encountering the expected patient conditions, efforts will be made to specifically select the needed patients needed to be seen. If these opportunities for specific patient encounters do not occur, the student will be exposed to the conditions/diseases secondarily through reading assignments, completion of online modules or discussions with the Clerkship Director.

Evaluation

An evaluation of student clinical performance will be completed by the assigned Clerkship Faculty at the end of the clerkship. A final summative report will be completed by the Clerkship Director at the end of the clerkship. The Education Director will review all components of the clerkship and include an assessment of each in the final grade summary.

Clerkship Specific Grading

The standardized clerkship policy can be found on the [Office of Medical Education website](#).

1. If any remediation is required, the student is no longer eligible for honors, and will be assigned an initial grade of IR (Incomplete Remediation) until remediation has been completed
2. Any breach in professionalism renders a student ineligible for honors
3. Minimum 110 patient encounters (pass/fail)
4. Minimum 30 major surgeries (pass/fail)
5. Completion of required problems and procedures (pass/fail)
6. Care of 3 to 6 comprehensive surgical patients (pass/fail)
7. Evidence-based Controversies in Surgery paper (pass/fail)
8. Completion of the six topic modules in Aquifer Wise-MD (pass/fail)

9. Clinical performance must be exemplary to be considered for honors
10. NBME must be at 75th percentile or higher to be eligible for honors consideration and must be at the 10th percentile to pass the clerkship

Policies

Student Mistreatment Policy

If you feel you are being mistreated, please refer to the Student Mistreatment Policy in the [FSUCOM Student Handbook](#) and report the incident as soon as possible.

College of Medicine 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. Students must use the [absence request form](#) that is located on Student Academics.

Academic Honor Policy

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. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to "...be honest and truthful and...[to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at <http://fda.fsu.edu/academic-resources/academic-integrity-and-grievances/academic-honor-policy>).

Americans with Disabilities Act

Students with disabilities needing academic accommodation should: (1) register with and provide documentation to the Student Disability Resource Center; and (2) bring a letter to the instructor indicating the need for accommodation and what type.

Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided. 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
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
<http://www.disabilitycenter.fsu.edu/>

College of Medicine Student Disability Resources

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.

Competencies

The following table outlines the **Surgery** clerkship competencies and assessment method for each, intended to be used as a guide for student learning.

Each clerkship objective/competency is mapped to the [FSU COM Educational Program Objectives \(EPOs\)](#) and [ACGME Core Entrustable Professional Activities \(EPAs\)](#). To view the complete table and for an overview of the curricular map for the clinical years at the Florida State University College of Medicine, please visit the syllabi page of the [Office of Medical Education](#) website.

Clerkship Competency	Assessment						
	NBME	Observation by faculty	Observation by clerkship director	Online module	Oral presentation	Patient documentation	Project
Surgery							
Develop familiarity with suturing wounds, bladder catheterization, and airway management.		x	x				
Recognize an acute surgical abdomen and identify its probable cause.	x	x	x				
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.		x	x				
Demonstrate appreciation of ethical, cultural, and public health issues in surgery including traditionally underserved populations, and oversight of surgical practice at the local, state, and federal levels.		x	x				
Effectively and respectfully communicate with colleagues, staff, patients, and families, emphasizing patient-centered care.		x	x				
Conduct a focused medical history, targeted physical examination, and create a meaningful differential diagnosis for surgical conditions.	x	x	x		x	x	
Demonstrate familiarity with common anesthetic agents, their administration, recovery from their usage, and develop facility with airway management.		x	x				
Apply informatics to critical appraisal of surgical literature, and making surgical diagnostic and therapeutic decisions.		x	x				x
Participate in the continuity of patient management through all phases of surgical care including pre-operative, peri-operative, intra-operative, post-operative, and post-discharge.		x	x				
Demonstrate familiarity with core surgical knowledge to include commonly encountered problems in orthopedics, urology, otolaryngology, thoracic/cardiovascular, and neurosurgery.	x	x	x				
Demonstrate ability to provide concise and logical patient presentations.		x	x		x		