



## BCC 7160 Surgery Clerkship 2018-2019

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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). Students will participate 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, out-patient 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.

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. 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.

## **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 and on the [Canvas Organizational site for Core Clerkships](#).

## **Orientation**

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

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.

## **Scheduled Hours/On-Call**

Students will take night call 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 days per week with Clerkship Faculty.**

## **Student Workhour Policy**

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.

## Absences

Extended absences from the sub-internship are not permitted. Any absence from the sub-internship 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: “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:

1. Identify a controversial problem in Surgery that interests you.
2. Present the pro and con evidence-based data with full references.
3. 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 [Evidence-Based Medicine Tutorial](#).

**Submission:** This paper is due at 5:00 pm on the last day of the clerkship. It is to be uploaded under the Surgery Project Documents tab in Student Academics. If the site is not available for any reason, then the paper needs to be emailed directly to Dr. Sweeney, the Education Director.

### Aquifer WISE-MD Online Modules

Students are **required** to complete a **minimum of three (3) topic modules** from the [Aquifer WISE-MD](#) virtual patient online learning site. There are 21 Case modules in all with 16 additional Skills modules, and you are encouraged to complete all modules.

Students must select one (option A or B) from each of these three topic areas:

Pediatrics	Vascular	Endocrine
A. Hernia	A. Abdominal Aortic Aneurysm	A. Thyroid Nodule
B. Pyloric Stenosis	B. Carotid Stenosis	B. Adrenal Adenoma

### ***Patient Care***

Students are expected to provide **comprehensive surgical care across the continuum** for **3-6 patients** during their clerkship. This includes following a patient pre-surgery, participating in the surgery and post-op 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 and patient care, as well as discharge coordination.

### ***Patient Log (ETS)***

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

- At least 30 Major Surgical Procedures/Operations conducted under general anesthesia
  - ETS Procedure “Major Surgical Procedure”
- 3-6 Continuum patients as described in Patient Care section above
  - ETS Procedure “Surgical Care – Comprehensive”

Students must record a minimum of **20 General Surgery Procedures**, including those specific below **at the numbers indicated:**

- Wound Repair/Suturing (**10**)
- Foley Catheter Placement 1-Female AND 1-Male (**2**)
- Airway management/Intubation/Bag and Mask Ventilation (**3**)
- General Surgery Procedures (**5**)

Students must record a minimum of following **Surgery Problems at the numbers indicated:**

- Gastrointestinal Disease (**40**)
- General (Non-GI) Surgical Patients (**20**)
- Oncology (**20**)

All entries **must** be completed within 48 hours of completing the course in order to avoid concerns about professionalism. Patient encounter data will be collected through the encounters tracking system. Failure to record the minimum number of patient encounters by the end of the clerkship will result 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

### ***Documentation of Workhours***

Students will use ETS to document by self-report their daily work hours. Students must enter daily work hours that includes both clinical experience and educational activities. Failure to report work hours is considered a breach of professionalism.

- Clinical care, including documentation in medical record
- Required educational meetings (i.e. Doctoring 3, clerkship meetings, educational meetings at residency programs)

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.

### ***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.

### ***Exam***

Students will take a web-based NBME Clinical Subject Examination in Surgery at the end of the clerkship. This exam does not test your knowledge of surgical technique. This exam 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!”

### ***Readings***

A **self-study program** has been designed to assist the student in addressing the core course content 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 textbook 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 subject exam, that is comprehensive, timed, and has a significant failure rate.

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 as follows:

- **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 sub-topics 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 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.

1	<b>Preoperative and Postoperative Care</b>
	Subtopics: nutritional assessment, immunocompetence, infection risks, factors affecting wound healing, respiratory failure
2	<b>Postoperative Complications</b>
	Subtopics: fat embolism, aspiration, myocardial infarction, cardiac failure, gastric dilatation, wound dehiscence, geriatric problems, such as delirium, dementia, and the propensity to fall.
3	<b>Special Medical Problems in Surgical Patients</b>
	a) <i>Endocrine Disease in the Surgical Patient</i>
	Subtopics: diabetes, hyperparathyroidism, hypothyroidism, adrenal insufficiency
	b) <i>Heart Disease and the Surgical Patient</i>
	Subtopics: coronary artery disease
	c) <i>Renal Disease and the Surgical Patient</i>
	Subtopics: renal failure
	d) <i>Hematologic Disease</i>
	Subtopics: surgery in patients with hematologic malignancies and/or receiving anticoagulants, disorders of hemostasis; coagulation factor concentrates.
4	<b>Wound Healing</b>
	Subtopics: biochemistry of healing; factors retarding healing
5	<b>Inflammation, Infection, and Antibiotics</b>
	Subtopics: infection risk factors, necrotizing infections, antibiotic colitis, tetanus, rabies, venomous bites.
6	<b>Fluid and Electrolyte Management</b>
	Subtopics: know this chapter cold; particularly acid-base balance! If given values for HCO <sub>3</sub> , pH, PaCO <sub>2</sub> you must be able to identify acidosis/alkalosis, metabolic/respiratory, compensated/uncompensated states.
7	<b>Surgical Metabolism and Nutrition</b>
	Subtopics: complications of parenteral nutrition, desirability of enteral nutrition
8	<b>Anesthesia</b>
	Subtopics: nerve injuries due to malpositioning, complications of anesthesia
9	<b>Shock and Acute Pulmonary Failure</b>
	Subtopics: cardiac compressive shock, cardiogenic, neurogenic, and septic shock, ARDS, fat embolism, pulmonary embolism.
10	<b>Management of the Injured Patient</b>

	Subtopics: tension pneumothorax, flail chest, aortic rupture, arteriovenous fistula, liver/pancreas injuries.
11	<b>Burns and Other Thermal Injuries</b>
	Subtopics: burn complications, heat stroke, frostbite.
12	<b>Head and Neck Tumors</b>
	Subtopics: salivary gland tumors, squamous cell cancers.
13	<b>Thyroid and Parathyroid</b>
	Subtopics: evaluation of thyroid nodules, thyroid carcinoma, hypercalcemic crisis, secondary hyperparathyroidism.
14	<b>Breast</b>
	Subtopics: Paget`s disease (including clinical appearance), carcinoma during pregnancy and lactation, non-invasive carcinoma, nipple discharge
15	<b>Thoracic Wall, Pleura, Mediastinum, and Lung</b>
	Subtopics: chylothorax, mesothelioma, superior vena cava syndrome, solitary pulmonary nodule, myasthenia gravis.
16	<b>Heart</b>
	Subtopics: Acquired Heart Disease: valvular disease, aortic dissection Congenital Heart Disease: VSD, transposition, tetralogy, PDA, coarctation.
17	<b>Esophagus and Diaphragm</b>
	Subtopics: achalasia, scleroderma, Zenker`s diverticulum, GERD, Boerhaave`s syndrome, diaphragmatic hernias.
18	<b>The Acute Abdomen</b>
	Subtopics: you learned all of this when you read Cope
19	<b>Peritoneal Cavity</b>
	Subtopics: pseudomyxoma, retroperitoneal fibrosis, workup of abdominal masses
20	<b>Stomach and Duodenum</b>
	Subtopics: gastrinoma, volvulus, Mallory-Weiss, MALT tumors, GI bleeding
21	<b>Liver and Portal Venous System</b>
	Subtopics: hepatoma, hepatic metastases, hepatic adenoma, Budd-Chiari, splenic vein thrombosis
22	<b>Biliary Tract</b>
	Subtopics: gallstone ileus, cholangitis, emphysematous cholecystitis
23	<b>Pancreas</b>
	Subtopics: cystic neoplasms, islet cell tumors, pancreatic ascites/effusion, adenocarcinoma
24	<b>Spleen</b>
	Subtopics: hereditary spherocytosis, ITP, TTP, post-splenectomy sepsis, myeloid metaplasia
25	<b>Small Intestine</b>
	Subtopics: blind loop syndrome, mesenteric occlusion, carcinoid tumors, Crohn`s disease.
26	<b>Large Intestine</b>
	Subtopics: polyps, volvulus, colitis.
27	<b>Anorectum</b>
	Subtopics: rectal prolapse, rectal fissure, fistula-in-ano, pilonidal cyst
28	<b>Hernias and Other Lesions of the Abdominal Wall</b>
	Subtopics: femoral hernia, obturator hernia
29	<b>Adrenals</b>
	Subtopics: primary aldosteronism, pheochromocytoma, incidentalomas, Cushings.
30	<b>Arteries</b>



	Subtopics: embolism, visceral aneurysms, thoracic outlet syndrome, renovascular hypertension, cerebrovascular disease
31	<b>Veins and Lymphatics</b>
	Subtopics: deep vein thrombosis, thromboembolism, lymphedema
32	<b>Neurosurgery and Surgery of the Pituitary</b>
	Subtopics: subdural and epidural hemorrhage, meningiomas, arteriovenous malformations, trigeminal neuralgia
33	<b>Otolaryngology</b>
	Subtopics: facial nerve paralysis, vocal cord paralysis, inflammatory neck masses.
34	<b>Eye and Ocular Adnexa</b>
	Subtopics: glaucoma, retinal detachment, corneal abrasion, perforation
35	<b>Urology</b>
	Subtopics: calculi, renal carcinoma, prostatic and testicular carcinomas
36	<b>Gynecology</b>
	Subtopics: ectopics, cervical carcinoma, carcinomas of the uterus and ovary, molar pregnancy, endometriosis
37	<b>Orthopedics</b>
	Subtopics: compartment syndromes, Morton`s toe, hip fractures, lumbar discs
38	<b>Plastic and Reconstructive Surgery</b>
	Subtopics: basal cell, melanoma, and squamous carcinomas
39	<b>Hand Surgery</b>
	Subtopics: nerve injuries, hand space infections, carpal tunnel syndrome
40	<b>Pediatric Surgery</b>
	Subtopics: thyroglossal and branchial cysts, Hirschsprungs disease, Wilms tumor, neuroblastoma, esophageal atresia, undescended testicle
41	<b>Oncology</b>
	Subtopics: sarcomas, Hodgkins, paraneoplastic syndromes, breast and colon chemotherapy
42	<b>Organ Transplantation</b>
	Subtopics: histocompatibility testing, pharmacology of immunosuppressive drugs

### **Learning 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

### **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.

## **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 clerkship and include an assessment of each in the final grade summary.

## **College of Medicine Standard Clerkship Grading Policy**

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

## **Clerkship Specific Grading**

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

# Policies

## **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](mailto: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 the assessment method for each, intended to be used as a guide for student learning. For a more detailed view on how these competencies map to the educational program objectives (EPO) and entrustable professional activities (EPA), as well as an overview of the curricular map for the clinical years at the Florida State University College of Medicine, please follow this link: <https://med.fsu.edu/index.cfm?page=medicalEducation.syllabi#clerkships>.

Clerkship Competency	Assessment						
<b>Surgery</b>	NBME/End of Clerkship Exam	Observation by Faculty	Observation by Clerkship Dir.	Online Module	Oral Presentation	Patient Documentation	Project/Written Assignment
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)	x	x	x	x			

Conduct a focused medical history, targeted physical examination, and create a meaningful differential diagnosis for surgical conditions (a, b)		x	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 (a, c, d, e)		x	x				
Recognize an acute surgical abdomen, and identify its probable cause (a, b)		x	x				
Exhibit the capability to provide concise and logical patient presentations (a, b, d)		x	x		x		
Develop familiarity with suturing wounds, bladder catheterization, and airway management (a)		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. (a, b)		x	x				
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)		x	x				
Exhibit facility in applying informatics to critical appraisal of the surgical literature, and to making surgical diagnostic and therapeutic decisions. (a, b, c, e)		x	x				x
Be familiar with common anesthetic agents, their administration, recovery from their usage, and develop facility with airway management. (a, b,)		x	x				
Effectively and respectfully communicate with colleagues, staff, patients, and families, emphasizing patient centered care (a, d, e, and f)		x	x			x	