

UNIVERSITY OF MISSOURI-COLUMBIA SURGERY CLERKSHIP STUDENT HANDBOOK

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I. SURGICAL EDUCATION AT MU

A. SURGERY CLERKSHIP

The Surgery Clerkship is a required surgical rotation of 7 weeks offered to students following completion of the preclinical curriculum. Emphasis is placed upon the evaluation and management of patients with surgical disorders. Students may participate in the Surgery Clerkship at the Columbia or Springfield campuses and as part of the Rural Track Program. The first week consists of orientation and simulation. For 3 weeks, students rotate on a general surgery service. For 3 weeks, students rotate on 3 separate specialty services. Students participate in the preoperative, operative, and post-operative care of surgical patients in the inpatient, out-patient, and on-call settings. Faculty discussions are presented on a wide variety of surgical topics. Evaluation and grading are consistent with other clinical clerkships. Many activities are standardized, but individual student experiences are quite variable.

B. CLINICAL ELECTIVES & SELECTIVES

A variety of surgical electives and selectives are offered to students in addition to the Surgery Clerkship. Most of these electives will meet the 4th year "surgical" and "other" selective requirements for graduation. In addition, students who are in the Rural Track program and have completed a 3rd year Rural Track rotation are then eligible to take a 4th year rotation at the same rural track site for selective credit upon approval. These electives and selectives offer a focused experience with close supervision and provide graded responsibility to prepare students for residency. Some surgical services offer 2- week electives as introductory experiences.

C. POSTGRADUATE INSTRUCTION

Residency programs are offered in the following surgical disciplines:

- Anesthesiology, 4 years
- General Surgery, 5 years
- Neurological Surgery, 6 years
- Ophthalmology, 3 years (after Internship)
- Orthopaedic Surgery, 5 years
- Otolaryngology, 5 years
- Plastic Surgery, 6 years
- Urology, 5/6 years
- Vascular Surgery, 7 years

In addition, post-residency fellowship training is offered in the following surgical disciplines:

- Advanced GI Surgery
- Bariatric Surgery
- Ophthalmology: Cornea
- Ophthalmology: Retina and Vitreous
- Orthopedic Spine
- Orthopedic Sports Medicine
- Orthopedic Trauma
- Orthopedic Adult Reconstruction
- Surgical Critical Care

II. CLERKSHIP GOALS & OBJECTIVES

During the Surgery Clerkship, the medical student will develop an understanding of the care of surgical patients through the following goals and objectives.

A. GOALS

1. Professionalism

Students will demonstrate professional behavior at all times during the Surgery Clerkship. Professionalism will be demonstrated by active engagement and participation in the activities of the surgical team. Professional behavior will also be demonstrated through interpersonal relationships with team members, with patients and families, and with other health care providers, while delivering patient-centered care.

2. Knowledge

The Surgery Clerkship student will be exposed to multiple and various aspects of the professions of surgery and anesthesiology. As a member of the surgical team, the student will perform pre-operative assessment and preparation of the surgical patient in both elective and emergent circumstances. The student will demonstrate knowledge of the pathophysiology of surgical diseases, the anatomy and physiology of operative interventions, including anesthetic effects, the influence of complications, and the process of convalescence.

3. Clinical Skills

The Surgery Clerkship student will learn and demonstrate physical diagnosis skills particular to the surgical patient. The student will also learn and demonstrate basic surgical skills, including sterile technique, suturing techniques, operative assistance techniques, wound care, resuscitation, and patient monitoring and management interventions, such as intravenous line and urinary catheter placement and endotracheal intubation.

B. OBJECTIVES

By the end of the Surgery Clerkship, the medical student should be able to accomplish the following objectives.

1. Professionalism

- Demonstrate professionalism through honesty, reliability, self-assessment, learning and work ethic (Application)
- Exhibit a patient-centered focus (Application)
- Work effectively and efficiently with other members of the surgical team (Application)
- Effectively communicate with other health-care providers, patients, and families. (Application)
- Demonstrate continual active engagement in the activities of the assigned surgical services, including in-patient, out-patient, and intra-operative care of patients throughout the perioperative and surgical experiences (Application)

2. Knowledge-Base

- Demonstrate knowledge of common surgical pathologies (Comprehension)
- Demonstrate knowledge of the medical care of the surgical patient (Comprehension)
- Demonstrate effective use of resources, including evidence-based information (Analysis)
- Understand and apply appropriate screening recommendations (cancer, or otherwise) to the surgical patient (Comprehension, Application)

3. Clinical Skills

- Perform appropriate history and physical examination of the surgical patient (Application)
- Utilize objective testing and consulting services effectively in the evaluation of the surgical patient (Application)
- Consolidate subjective and objective data to determine a differential diagnosis for the surgical patient (Analysis)
- Develop an evidence-based management plan for the surgical patient (Synthesis)
- Demonstrate basic surgical skills and techniques, including laparoscopy, universal precautions, OR safety and sterile techniques, including participation in simulation and laboratories (e.g., suture, IV/intubation, urology lab) (Application)
- Document patient care thoroughly and accurately (Application)
- Understand surgical risk factors, evidence-based risk assessment of the surgical patient, and methods to reduce surgical risks and preserve patient health

4. Health Maintenance and Preventive Care

- Understand and apply appropriate health preservation and prevention recommendations to the surgical patient (Comprehension, Application)
- Understand and apply applicable means to address health disparities among the surgical patient populations (Comprehension, Application)

 Understand surgical risk factors, evidence-based risk assessment of the surgical patient, and methods to reduce surgical risks and preserve patient health

5. Decision-Making

 Understand the shared decision-making, patient autonomy, and methods of effective informed consent processes

6. Evidence-Based Medicine

 Understand surgical risk factors, evidence-based risk assessment of the surgical patient, and methods to reduce surgical risks and preserve patient health

7. Behavioral, Psychological, and Social

 Understand the behavioral, psychological, and social aspects of surgical diseases and benefits of surgical treatment

C. Rural Track Surgical Experience

In addition to the above objectives, the Rural Track medical student will develop an understanding of issues relevant to practicing surgery and the care of surgical patients in a rural setting. Students will gain core clinical experiences working with qualified surgical preceptors. The student will understand and demonstrate care for patients outside of the University setting and understand the cultural and community relevance and service provided by a rural community surgeon. This experience affords students the unique opportunity to live and work in a rural community, as well as demonstrate service learning through community integration activities.

III. CLERKSHIP CURRICULUM

The Department of Surgery and Surgery Clerkship administration welcome you to this portion of your educational experience. The Surgery Clerkship is structured to balance exposure to a variety of surgical professions with an in-depth experience, in the limited time allowed. In general, you should gain appreciation for the pathophysiologic processes involved in surgical diseases and the basic surgical skills needed to progress to the senior year. Understanding of the entire perioperative and operative experience of patients with surgical problems will be beneficial to you regardless of your chosen career path.

A. Clerkship Structure

The basic structure of the clerkship includes a 2-day Orientation, a **3-week** rotation on a general surgery service, and **three 1-week** rotations on three different specialty surgery services. Prior to the block, each student completes a Clerkship Lottery form, and service assignments are based on results of the lottery, dependent on number of students on rotation and available services. Students are not guaranteed to be assigned to their preferred selections. The

standardized knowledge-based examination and a group review and feedback session occur in the final week of the clerkship.

General Surgery (3 week) services include University General Surgery, University Acute Care Service, University Surgical Oncology, and VA General Surgery. Specialty surgery services include Anesthesiology, Cardiothoracic Surgery, Neurosurgery, Ophthalmology, Orthopedic Surgery, Otolaryngology, Pediatric Surgery, Plastic Surgery, Night Float, Surgical Intensive Care, Urology, and Vascular Surgery.

Orientation is a series of introductory discussions and training sessions covering a general introduction, operating room processes, sterile technique, facility tours, safety issues, administrative and documentation review, clinical skills reviews, and laboratory simulation activities.

B. Student Activities and Expectations

1. Clinical Activity

Regarding clinical activity, the student will round with the service team and provide in-patient care, write progress notes, scrub on OR cases, and attend out-patient clinics. Students are expected to be actively engaged in these activities. In general, the more engagement and interest a student expresses, the more engaged the instructors become, leading to more teaching and greater participation of students in surgical procedures.

Students are required to perform a relevant component of a history and a physical examination during the clerkship. This must be observed by a resident or faculty member. When completed, you will need to notify the clerkship coordinator and record it in PLOG (see PLOG Requirements). Students should take "ownership" of your patients, particularly ward patients (in-patients) and patients whose operative procedures in which you will participate. You are expected to know these patients, their histories, examinations, objective data, and care plans. A variety of resources are available for your education on your patient's surgical pathologies. The suggested textbook(s) is (are) *Essentials of General Surgery and Surgical Specialties*, by Peter F. Lawrence, MD. For a list of additional textbook resources, see **Appendix A**.

2. Discussions/Didactics

Faculty discussion sessions are held Monday through Friday in the afternoons and attendance is required with the sole exception of a need to remain in an operative procedure as determined by the lead surgeon. Faculty discussion sessions are held daily in MC203/MC401 or via zoom. The schedule will be distributed at the beginning of the block. Your attendance and active participation are expected. You are expected to be absent from discussion sessions only if required to remain in an operative procedure. If you are scrubbed, ask the operating surgeon if you should leave. Follow his or her guidance regarding the benefit of staying with the case or attending lecture. Available topics are listed in **Appendix B**.

Student Call

Call will be covered (in house) each night and weekend by the night float student or assigned student. Each student reports to the resident on call at 6 pm and works with the resident until 6 am the next day. Weekend call begins at 6 am Saturday and lasts 24 hours. Call is the student's primary exposure to the Emergency Center and to trauma patients.

Two call rooms (suites) are available for medical students in Suite M108. Call Room 7 (M108A) has 4 male beds, Call Room 6 (M108B) has 4 female beds. Access to the outer door as well as individual call rooms is by badge swipe. Badges have been cleared through hospital security for access. If you are unable to access the rooms with your badge, please contact hospital security at 882-7147. If no bed is available, please contact the house manager through the hospital operator.

4. Operating Room

The operating room environment provides a unique learning experience. Appreciation of multiple anesthetic techniques can be acquired by accompanying each of your patients in the holding area and during induction. During the procedure, observation and palpation of the gross pathology can help relate to the patient's history, symptoms, and physical findings. Understanding of regional anatomy, indications for surgery, and operative techniques is expected. Attending and resident surgeons will be present and interested in teaching. Take advantage of this opportunity through appropriate questions and observations. Expect to assist with surgical procedures when possible. Again, the more engaged student generally has a more enhanced and active learning experience. Introduce yourself to the attending or chief resident at the beginning of the case.

Operations are performed at University Hospital, Veterans Administration Hospital, Women's and Children's Hospital, and Missouri Orthopaedic Institute (MOI). Sterile technique and operating room procedures are presented during clerkship orientation. Breaks in sterile technique can risk complication and patient morbidity and must be avoided. OR scrubs are not to be worn outside of the operating room suites without a covering lab coat; they should **never** be removed from the hospital. Students shall comply with all MUHC rules and regulations governing the operating room environment, including proper use of operating room clothing.

5. Conferences

During the academic year, Surgical Grand Rounds are held on designated dates at 7:00 am in Acuff Auditorium (MA217). Topics and speakers will be posted. Attendance is mandatory and professional business attire is required. **Scrubs are not allowed.** The Department of Surgery offers many other conferences. Student participation is encouraged but is not mandatory. Students are encouraged to attend conferences of specialty services when rotating on those specialty rotations.

6. Patient Care Integrated Skills & Simulation

Each student is required to observe and gain competence in the following patient care skills: sterile technique, intravenous cannulation, arterial blood gas interpretation, nasogastric insertion, urethral catheterization, wound dressing changes, suture, and staple removal. The following Skills Labs and simulations will be required during the first week of the Clerkship:

- Perioperative Skills: IV lines and intubation; these skills are performed in holding areas, operating rooms, patient wards, intensive care units, and emergency center, with supervision
- Suture Skills: common suturing techniques are demonstrated and performed
- Laparoscopy Skills: reviews laparoscopic procedures and techniques
- Urinary Catheter (Foley) Skills: review and perform placement of urinary catheters.
- Mock Trauma: clinical simulation session supported by the staff of the Shelden Clinical Simulation Center.

7. PLOG Requirements

PLOG (Patient Log) is an on-line system utilized by the student, the Clerkship, and the School of Medicine to keep track of patient encounters and select required activities during clerkships. Completion of PLOG requirements is mandatory. Failure to complete PLOG requirements will result in a failing grade for the clerkship. Encounters of patients within specific disease categories constitute the majority of PLOG requirements. These encounters in the Surgery Clerkship PLOG represent a minimum variety meant to ensure some commonality or standardization of exposure for students. Entries should be made upon seeing the patient or soon thereafter. This is confidential information. Any written notes or reminders made with the intention to enter at a later date must be shredded once entered. All patients you see for whom you could write a SOAP note must be entered. Patient encounters include patients seen on the wards, in the clinics, and in the OR. Once you enter an encounter, it cannot be edited. A patient can only be entered once, unless the patient is seen in a different setting. It is the student's responsibility to assure they are meeting the minimum course requirements throughout the block. Once the minimum requirements are met, further recording is voluntary. Please keep track of your progress by using the "My Progress" tab inside PLOG.

Other requirements within the PLOG system include recording of mid-block feedback (see Evaluations & Feedback). In addition, the clinical requirement to perform a relevant portion of a history and a relevant portion of a physical exam while observed by a resident or faculty member during the Surgery Clerkship is recorded in the PLOG system. The history and examination do not need to occur on the same patient and can be performed at any time during the clerkship. You must record completion of mid-block feedback and of observed history and observed physical examinations and the date when they occurred in the PLOG system. A paper copy of midblock needs to be turned in to the student coordinator.

All requirements must be met by the end of the clerkship. The clerkship administration will closely follow each student's progress each week and at mid-block. Random audits of entries will be performed. Falsification of entries constitutes an Honor Code violation, exemplifies unprofessional behavior, and may likely result in failure of the course and other potential consequences. Students must email the Clerkship Coordinator once all PLOG requirements are completed.

See **Appendix C** for more details on PLOG requirements.

8. Evaluations & Feedback

All students will be required to complete on-line evaluations of the faculty and residents that they work with, as well as an overall evaluation of the clerkship. These evaluations must be completed before the final date of the clerkship. Credit for the clerkship will not be given if the evaluations are not competed.

Each clinical clerkship requires you to obtain "mid-rotation" formative feedback. For your Surgery Clerkship, you should ensure feedback from a faculty member or resident at the end of week 2 of your general surgery rotation. The purpose is to allow you to act on that feedback before your formal evaluation is completed at the end of week 3 of your general surgery service. A feedback form will be given to you at the clerkship orientation. You do not need to do a self-assessment of every descriptor on the form, but you should complete the form as it will best benefit you and use it when you have your mid-rotation feedback session. We encourage you to get feedback mid-week during your specialty week rotations as well, but you do not need to use the feedback form in these instances. You must submit your completed mid-rotation feedback form to the course office or Clerkship Coordinator and record completion of your feedback and the date when it occurred in the PLOG system.

Clerkship administration will meet with students at the end of the block to provide a forum for bilateral feedback. Lunch is generally provided by the Department of Surgery Chair for this session.

9. VA Service

General activities and expectations of the Veterans Administration (VA) General Surgery service are the same as other general surgery services at the University. However, some documentation, administrative, and other logistical processes are unique to the VA system. For more specific information, see **Appendix D**.

IV. PATIENT CENTER CARE

Our graduates are able to deliver care that improves the health of individuals and communities. Patient-centered care reflects a respect for individual patient values, preferences, and

expressed needs. This care is grounded in the best available evidence and conserves limited resources. It depends on shared decision-making and active patient participation. Our graduates' care will be marked by compassion, empathy, and patient advocacy.

V. STUDENT EVALUATION

Each student's performance is continuously evaluated during the block. The final grade is determined by three component grades: Faculty/Resident Evaluation of Student (FES), the NBME Surgery shelf exam, and Professionalism. Possible final grades are Honors, Letter of Commendation, Satisfactory, and Unsatisfactory. The final grade is the equivalent of the lowest component grade. Criteria for specific grades are listed below.

A. Faculty Evaluation of the Student (FES)

FES grades are weighed by time spent on service. The evaluations based on the three weeks of General Surgery performance will account for 57.25% of the total FES grade. The evaluations based on the three weeks of Specialty Week performance will count for 14.25% each. Thus, the three specialty weeks combined will account for 42.75% of the total FES grade. On the Surgery Clerkship, you are only graded by faculty and residents with whom you spend time. Please note that some service grades are submitted by a designated person, such as the division chief, though you may have never spent time with that person.

Preceptors are encouraged to complete evaluations immediately following your time on their service. All grade components are collected, including all FES evaluations, and grading calculations are made prior to the final grade determination, confirmation, and submission to the OME. The LCME policy requires grades to be completed within 6 weeks of the end of the course. At the University of Missouri School of Medicine, clerkship grade submission times generally average around 4 weeks from the end of the clerkships. You may expect to have access to your grade or be notified of its submission around 4 weeks after the end of the clerkship. Eligible final course grades are based on the final FES grade as follows:

Grade	Unsatisfactory	Below Expectations	Meets Expectations	Exceeds expectations	Exemplary
Honors	0	0	< 50%	>=50% plu exem	
Letter	0	<= 5%	<50%	>= 5	0%
Satisfactory	<=15%				
Unsatisfactory	>15%				

B. Knowledge

On the Surgery Clerkship, the Knowledge grade component is determined by percentile rank performance on the NBME Surgery (Shelf) Examination. Criteria for exam grading are uniform and standardized across all MU clerkships that utilize the NBME component examinations. The final grade eligibility is determined as follows:

Eligible Grade	NBME Percentile Rank	
Honors	85%+	
Letter	70-84%	
Satisfactory	5-69%	
Unsatisfactory	4% or less	

C. Professionalism

Professionalism is a critical component of medical education and necessary for high quality health care. It is often felt to be a more important factor in determining quality of performance than knowledge or clinical skill. Demonstrations of professionalism include, but are not limited to the following:

- Honesty
- Reliability
- Strong work ethic
- Team-oriented
- Timeliness (PLOG, evaluations of faculty & residents, SEC, attendance, etc.)
- Thorough completion of activities (labs, simulations, call duties, SOM requirements, etc.)
- No unexcused absences
- Appropriate preparation for clinical assignments

Student professionalism performance will be graded by evaluators as Unsatisfactory, Marginal, or Meets expectations. Eligible final grades are determined as follows:

Eligible Grade	Unsatisfactory	Marginal	Meets Expectations
Honors	0	0	X
Letter	0	0	Х
Satisfactory	0	X	X
Unsatisfactory	Х		

D. Remediation

The final grade determination is determined by the lowest three above components. A grade of Unsatisfactory in any one of the three component areas results in failure of the clerkship. Remediation of a failing grade is determined by the Committee on Student Promotions (CSP).

The Surgery Clerkship administration recommends remediation specific to the failed component.

Unsatisfactory Component	Remediation Recommendation
FES	3-week rotation (e.g., Interblock) on a service other than the
	previously failed service achieving a passing FES grade
Knowledge	Retake the NBME Surgery exam achieving a percentile rank of
	5 or higher (date determined by the Office of Medical
	Education)
Professionalism	3-week rotation (e.g., Interblock) on services other than the
	previously failing service achieving a passing Professionalism
	grade

If a student fails remediation, he or she must fully remediate the Surgery Clerkship. It should be noted that unprofessional behavior may be sufficient grounds for recommendation for dismissal without any option for remediation. Such circumstances are managed by the Committee on Student Promotions (CSP), with final determination regarding dismissal made by the Dean of the School of Medicine.

VI. POLICIES

A. Academic Honesty

Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work is responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest, whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences, ranging from probation to expulsion. When in doubt about dishonesty, plagiarism, paraphrasing, quoting, or collaboration, consult the instructor or clerkship administration.

The Department of Surgery adheres to all policies of the University of Missouri School of Medicine and the University of Missouri Health Care.

The Surgery Clerkship knowledge-based examination is a closed resource examination.

B. Accommodations

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share, or if you need to make special arrangements in case the facility must be evacuated, please see the clerkship coordinator privately as soon as possible.

Office location: MC506

Office hours: 8:30 am – 4:30 pm
Office phone: 573-882-8081

If disability related accommodations are necessary (e.g., note taker, extended examination time, captioning), please establish an accommodation plan with the Office of Disability Services (address below) and then notify the Surgery Clerkship coordinator prior to your clerkship block to ensure reasonable accommodations.

Office of Disability Services S5 Memorial Union, Columbia, MO 65211 573-882-4696 (phone), 573-234-6662 (video phone) http://disabilitycenter.missouri.edu

For other MU resources for students with disabilities, please see the following resources:

https://disabilitycenter.missouri.edu/ https://disabilitycenter.missouri.edu/accommodations-and-supports/ https://diversity.missouri.edu/offices-centers/accessibility-ada/

C. Diversity & Inclusion

The University community welcomes intellectual and cultural diversity and respects student rights. The instructors and administrators of the Surgery Clerkship respect diversity and inclusivity without regard to demographic characteristics and oppose discrimination based on such characteristics. Students who have questions concerning quality of instruction in this course may address concerns to either the Department Chair, Clerkship Director, Clerkship Coordinator, or Director of the Office of Student Rights and Responsibilities (http://osrr.missouri.edu/). All students will have the opportunity to submit an anonymous evaluation of the instructor(s) at the end of the course. If you have any questions about academic integrity or intellectual pluralism, please feel free to contact the Provost who oversees the Office of Student Rights and Responsibilities.

D. Absence

All students are expected to meet a high level of professional standards which includes attendance and participation. **No unexcused absences are acceptable**. It is understood that an absence may be necessary, for reasons such as illness, death in the family, religious holiday, and attendance for presentation at a professional meeting. All anticipated absences must be approved with the clerkship administration by submitting a **Request for Absence** form to the Clerkship Coordinator a minimum of **two weeks prior to the start of the clerkship**. Request are not guaranteed to be approved. Students on the clerkship are allowed a maximum of 4 days off over the course of the rotation for rare and compelling reasons without remediation. The expectation is that students will not have any absences, except in unusual and specific situations, and may be required to make up some or all time missed. For more information and

absence request forms, refer to the School of Medicine absence policy https://medicine.missouri.edu/education/medical-education-curriculum/absence-policy.

E. Student Mistreatment

The University of Missouri System is an Equal Opportunity/Affirmative Action institution and is nondiscriminatory relative to race, religion, color, national origin, sex, sexual orientation, age, ethnicity, disability, or status as a Vietnam-era veteran. The University is committed to providing a positive work and learning environment where all individuals are treated fairly and with respect, regardless of their status. The University does not tolerate mistreatment by or of its students, faculty, residents, staff, or patients. Medical students are sometimes reluctant to discuss mistreatment for fear of being identified or even receiving reprisals; yet they often want alleged mistreatment incidents to be investigated. The School does not tolerate retaliation or reprisals against students who bring incidents of possible mistreatment to the attention of faculty and/or school officials. The mistreatment of students by patients may be particularly painful. Students are strongly encouraged to discuss such incidents with a trusted supervisor, mentor, or colleague.

Concerns, problems, questions, and complaints may be discussed anonymously and confidentially with the Associate Dean for Student Programs, whose role specifically includes student advocacy, and who is available to all enrolled MU medical students.

Please see the Student Handbook for more resources and reporting information:

https://medicine.missouri.edu/offices-programs/education/student-resources

Look for Student Handbook for the current Academic Year.

F. Student-As-Patient Conflict

Our accreditation standards require that any health professional who provides health services of any kind to a University of Missouri School of Medicine medical student must have no involvement in the current or subsequent academic assessment or promotion of the medical student who received or is receiving those services. Stated simply, those who provide health services to a student are not allowed to evaluate that student. When a student is assigned to a facilitator, preceptor, or service, or appears before a committee, where such a conflict exists, it is the responsibility of all concerned to bring the conflict to the attention of the course or clerkship director and the Office of Medical Education, in order that an alternative assignment may be made, or action taken that ensures the health care provider concerned is not involved in the assessment or promotion of a particular student. Faculty, residents, students, or other health professionals who have questions about this policy are requested to contact the Associate Dean for Student Programs.

VII. GRADE APPEAL PROCESS

Students may question any component of the grade in a clinical course. A re-consideration shall not be used to question a rule, procedure, or policy established by an authorized faculty or administrative body. Rather, it shall be used as due process by a student who believes that a

rule, procedure, or policy has not been followed or has been applied in an inequitable manner. Requests to re-consider the grade are considered part of the student assessment process and therefore subject to the Honor Code. **Students shall not contact faculty or residents to request a change in clinical evaluations.** Any requests made in this manner will be considered unprofessional and will void the student's opportunity to appeal that component of the grade. When a review of a grade occurs, the student's entire performance on the component in question will be reassessed. The University of Missouri Registrar's guidelines for changes in grades states that no grade shall be otherwise changed unless there is clear, convincing, and unequivocal evidence that it was a direct result of arbitrary and capricious conduct by the instructor or faculty evaluator. This Department of Surgery process complies with and will not supersede the policies of the University of Missouri or the School of Medicine.

Reconsideration Process

A student who wishes to have any component or overall grade reconsidered must submit a request for reconsideration to the Clerkship Director in writing no later than **two (2) weeks** after the final clerkship grade has been released to the students by the Offices of Medical Education. The request must include the following:

- 1. A request for grade reconsideration
- 2. The course in which the grade was received
- 3. The block in which the grade was received
- 4. A clear statement of the perceived grade discrepancy
- 5. The relief sought
- 6. Address and phone number of the student
- 7. Signature of the student

The Clerkship Director will acknowledge receipt of the request to the student within **ten (10)** calendar days of its receipt. The Clerkship Director and Department Chair have the discretion to discuss the request with the student and other involved parties in an effort to resolve the discrepancy within the course department. A determination will be made within **thirty (30)** calendar days of receipt of the request, and the student will be notified of the determination in writing. If a discrepancy is determined to exist and is resolved in this manner, the terms of the resolution will be put in writing, signed by the Clerkship Director, and reported to the Offices of Medical Education. If it is determined that a discrepancy does not exist, the Clerkship Director shall respond to the student in writing within **thirty (30)** calendar days of receipt of the written request for re-consideration of the grade.

If a student is uncomfortable approaching the Clerkship Director, then he or she shall submit the request for reconsideration to the clerkship Department Chair. If a student is uncomfortable approaching the department Clerkship Director and Department Chair, then he or she is encouraged to discuss the issue with the Associate Dean for Student Programs who will advocate for him or her.

Appeal to the Dean

Should the student be dissatisfied with the response of the Clerkship Director and/or Department Chair he or she may, within ten (10) calendar days of receipt of such response, submit a written appeal to the Dean of the School of Medicine, through the Associate Dean for Education Improvement. Upon receipt of the written appeal, a panel will be formed by the Dean's Office. The panel will consist of one clinical course director, one other faculty member, and one student member (student member currently serving on the Curriculum Board) drawn at random from the pool of participants in each group. The pool of participants in each group will be solicited annually from each group. The list of volunteers will be maintained by the Offices of Medical Education. Names will be drawn randomly by the Associate Dean for Education Improvement. No member of the panel may be from the department of any of the involved parties. If a person whose name is drawn is not able to participate because of prior commitments, another name will be drawn. The panel may gather evidence, interview individuals, and request further information from the involved parties. Within thirty (30) calendar days of the receipt of the appeal, the panel will give a written copy of their recommendation to the Dean. If the decision of the panel is not unanimous, the dissenting party may submit a written dissenting opinion at the same time. The Dean will respond in writing within five (5) working days of receipt of the panel's recommendation. The Dean may accept the recommendation, amend it, reverse it, or refer it back to the panel for reconsideration. The decision of the Dean is final.

Additional information may be found in the University of Missouri <u>Grievance Policy</u>, CRR 380.010.

VIII. APPENDIX A. REFERENCE TEXTS

Specialty	Title	Author
Anesthesiology	Clinical Anesthesia, 7 th Ed	Barash, et.al.
	Basics of Anesthesia, 6 th Ed	Miller, Pardo
Cardiothoracic Surgery	Cardiac Surgery in the Adult, 5 th Ed	Cohn, Adams (Free Online)
	Shield's General Thoracic Surgery	LoCicero III, et.al.
	Comprehensive Surgical Management of	Jonas
	Congenital Heart Disease	
General Surgery	Sabiston Textbook of Surgery	Townsend, et.al.
	Schwartz Principles of Surgery	Brunicardi, et.al.
Neurosurgery	Handbook of Neurosurgery	Greenberg
	Youman's Neurological Surgery	Winn
Ophthalmology	Bailey's Head and Neck Surgery-	Jonas T. Johnson, 2013
	Otolaryngology, Fifth ed	
	Ballenger's Otorhinolaryngology: Head	P. Ashley Wackym, James B.
	and Neck Surgery	Snow Jr, 2016
	https://timroot.com/ophthobook/	
	Wills Eye Manuel and Basic	Contact Shadaryl Bassett at
	Ophthalmology	bassetts@health.missouri.edu
Orthopedic Surgery	Physical Exam of Spine & Extremities	Hoppenfield
	Surgical Exposures in Orthopaedics: The	Hoppenfield, DeBoer, Buckley
	Anatomic Approach	
Otolaryngology	Bailey's Head and Neck Surgery-	Jonas T. Johnson, 2013
	Otolaryngology, Fifth ed	
	Ballenger's Otorhinolaryngology: Head	Ashley Wackym, James B.
	and Neck Surgery	Snow Jr, 2016
Pediatric Surgery	Ashcraft's Pediatric Surgery	Holcomb, et.al.
	Pediatric Surgery Handbook	Lugo-Vicente (Free Online)
Plastic Surgery	Plastic Surgery: Indications, Operations,	Achauer, et.al.
	and Outcomes	
Surgical Oncology	DeVita, Hellman, and Rosenberg's	DeVita, et.al.
	Cancer: Principles & Practice of Oncology	
	Holland-Frei Cancer Medicine	Bast, et.al.
Trauma	Trauma, 5 th Ed or later	Moore, Feliciano, Mattox
Urology	Campbell's Urology	Walsch, et.al.
	Smith & Tanagho's General Urology	McAninch, Lue (Free Online)
Vascular Surgery	Rutherford's Vascular Surgery	Cronenwett, Johnston

IX. APPENDIX B. POTENTIAL FACULTY DISCUSSION SESSION TOPICS

Fluid & Electrolyte Balance	Acute Care Surgery
Shock	Acute Care Surgery
Surgical Critical Care or Vents	Acute Care Surgery
Traumatic Abdomen	Acute Care Surgery
Wound Care	Acute Care Surgery
Opioids	Anesthesia
Appendicitis	General Surgery
Gallbladder	General Surgery
Pediatric Neurosurgery	Neurosurgery
Neurosurgery	Neurosurgery
Children's Orthopaedics	Orthopaedic Surgery
Common Problems in Children's Orthopaedics	Orthopaedic Surgery
Evidence Based Medicine for Orthopaedics	Orthopaedic Surgery
Spinal Fractures & Fusions	Orthopaedic Surgery
Tissue Injuries and Reconstruction	Orthopaedic Surgery
Airway Management	Otolaryngology
Facial Plastic & Reconstructive Surgery	Otolaryngology
Otology	Otolaryngology
General Otolaryngology	Otolaryngology
Pediatric Airway Management	Otolaryngology
Pediatric Surgery	Pediatric Surgery
Plastic Surgery	Plastic Surgery
Cleft and Craniofacial Surgery	Plastic Surgery
Reconstructive Surgery	Plastic Surgery
Breast	Surgical Oncology
Endocrine Surgery	Surgical Oncology
Colorectal Cancer	Surgical Oncology
Multi-disciplinary Management of Pancreatic Neoplasms	Surgical Oncology
Multi-disciplinary Management of Colorectal Hepatic Metastases	Surgical Oncology
Transplantation	Urology
Benign Urology	Urology
Robotics	Urology
Urologic Oncology	Urology
Vascular Disease	Vascular Surgery
Vascular Surgery	Vascular Surgery
Aneurysms	Vascular Surgery
Peripheral Artery Disease	Vascular Surgery

X. APPENDIX C. PLOG Entries

Surgery Clerkship	e I	C . 111		
Requirement	Examples	Setting	Experiences Required	Level of Participation
Abdominal Pathology	Abdominal pain NOS, appendicitis, cholecystitis, diverticulitis, pyelonephritis, kidney stone, pancreatitis, pyloric stenosis	Inpatient	3	Full
Acute Care	Burn, acute trauma, surgical ICU care, shock	Inpatient	1	Full
Ambulatory Surgical Care	Ambulatory postoperative care, ambulatory surgery (head/neck, orthopedic, ophthalmologic, plastic, urologic), elective surgery, endoscopy	Ambulatory	3	Full
Cardiovascular Disease	Coronary artery disease, carotid disease, peripheral vascular disease, vascular disease NOS	Ambulatory/Inpatient	1	Full
Endocrine Pathology	Adrenal, bariatric, pancreatic, parathyroid, thyroid	Ambulatory/Inpatient	1	Full
Laparoscopy technique	Skill lab	Inpatient	1	Simulation
Malignancy	Breast, endocrine, enteric/GI, genitourinary, head/neck, kidney, lung, musculoskeletal, nervous system, prostate, skin	Ambulatory/Inpatient	3	Full
Perioperative Skills	Central line placement, endotracheal intubation, intravenous cannulation, nerve block, nasogastric tube placement	Ambulatory/Inpatient	3	Observed
Sterile Technique	Scrubbing, gowning, sterile field preparation	Ambulatory/Inpatient	3	Full
Surgical Patient Care	ABG interpretation, cast/splint, ECG interpretation, debridement, dressing, imaging (CT, PET, MR, US, XR) interpretation, suture/staple removal	Inpatient	3	Full
Suture technique	Skill lab	Inpatient	1	Simulation
Trauma TEAM Experience	Skill lab	Inpatient	1	Simulation
Urinary catheter placement	Skill lab	Inpatient	1	Simulation

XI. APPENDIX D. VA SERVICE INFORMATION

A. VA OPERATING ROOM ORIENTATION

a) Clothing

Scrub clothing worn out of OR Suite must be changed before re-entering the OR Suite. Civilian attire may not be worn into the right corridor off the main hall — only to the left, which leads to the locker area. Cap, mask, and shoe covers must be worn in the OR Suite at all times and are not to be worn out of the OR Suite. Beards must be covered by hoods.

b) Hours

OR regular hours are 6:45 am - 3:30 pm. Surgery day begins at 7:00 am. First case starts are scheduled at 7:30 am. All patients (except local anesthesia only) will go to the Recovery Room unless special arrangements have been made to return to a unit. Late or emergency surgery patients will be recovered in the ICU or with special arrangements on a ward.

c) Phone System

VA extensions from outside the VA system: dial 814-6000, enter the 5-digit extension

VA operator from outside the VA system: dial 814-6000, wait for operator

Outside line from VA system: dial 9 (to call any outside number including MU numbers)

OR Clerk: 5-3878

Recovery Room: 5-3875

VA Paging system: 814-6696 and enter VA pager #

d) Other

No eating or drinking is allowed in the OR or Recovery Room, other than in the break room.

If assistance is needed in scrubbing, please ask.

M3 students assigned to the VA will receive a scrub card. The coordinator will email you before starting the rotation to get your scrub size and have the card made. If you will just be spending a few days at the VA please stop by the OR control center (administrative office), sign the log, and take a card for the day and return it when you leave.

B. VA MEDICAL STUDENT RESPONSIBILITIES

For morning rounds, open the list and please obtain the vitals for the patients on your service; see below for further details.

THE LIST

Where to find it:

"Start" \rightarrow "CMO-WS153588" \rightarrow "data" under Network Location \rightarrow "PUBLIC" folder \rightarrow "General Surgery List" folder \rightarrow "General Surgery List" or "Current Vascular Surgery List Current" word document (whichever one you're on).

What to do:

Every morning please update the following:

- Room Number! This doesn't change as often as on services at the University, but in the middle of the night sometimes patients get moved around.
- Vitals in CPRS, I's and O's on the floor (patient's room or nurse's station).

Sometimes in the afternoon, update the following:

- Before/After surgeries, please add any new patients to the list. Include their past
 medical and surgical histories and feel free to abbreviate and be selective (by and large,
 we don't care if they have a history of glaucoma or "lumbago", but I DO care if they
 have a history of CAD s/p CABG, COPD, prior CVA or DVT). This is very helpful when
 thinking about what a patient's increased risks are in the perioperative period.
- Update medications.
- Update procedures/diagnoses and their dates.

End of week:

- Add next week's surgery schedule to the bottom of the list.
- "Start" → "CMO-WS153588" → "data" under Network Location → "PUBLIC" folder →
 "General Surgery List" → "SURG Calendar" folder → click on the excel file for whatever
 service and month.

2. I/Os, VITALS, LABs

For Ins/Outs:

- List the volume (in or out) for the PREVIOUS 24 hours- **from 00:00-24:00** and then in parentheses, list the volume. Since midnight on the morning of your vitals collection-example: I = 2450 (200), O= 3000 (500), UOP = 2000 (400), Stool = 1000 (100).
- If there is ostomy output recorded, please list the output under stool.
- If there is any DRAIN output (JP, TrueClose, WoundVAC), please list this anywhere.

For Vitals:

- Tmax is more important than Tcurrent. Please look at the patient's temperatures ranging from the time of vitals.
- If a patient has an episode of severe HTN (SBP > 180) or is intermittently tachycardic, take a mental note (in addition to writing it down) and discuss it with your residents-(these are the steps that make you a part of the team and we will LOV you for it).

For Labs:

- You see three sets of parentheses along with the skeleton for CBC and BMP. Within these parentheses, please include the value from the DAY PRIOR (or last available lab): WBC, HGB, and Cr.
- Please include any other pertinent labs (a patient on the ventilator usually has an ABG, patients on Coumadin have an INR, etc., and please remember to check culture results daily if they've been taken).

3. THE PRINTER

You'll need to set up the printer for your personal VA account the first time you log on. To add the printer:

 "Start" → "Settings" → "Printers & Faxes" → "Add Printer" → Follow the instructions on the screen, click "Next" when the Printer Wizard pager first pops up → "A network printer or printer attached to another computer" → "Under" Find a printer in the directory" \rightarrow Under name enter "MSURG1" and under location, "6" and then click "Find now" \rightarrow When it finds the printer, highlight it where it shows up below and click "ok".

4. ATTIRE

- Every day, please feel free to wear scrubs except on Wednesdays and Fridays- wear or bring dress clothes on these days as you will go to clinic (if your service has clinic that day) or you may be expected to go to clinic later (if you finish with the OR and are helping the other service in clinic).
- If you are on vascular surgery, you do not need to dress up for the 7AM Mon/Thurs conferences.

5. SCHEDULE

A medical student needs to be in every General Surgery or Vascular OR case. General weekly schedule:

- **Monday:** General Surgery OR & Vascular Surgery OR. Vascular surgery has 7AM conference.
- **Tuesday:** Vascular Surgery OR all day; General Surgery has Colonoscopy Clinic in the morning and afternoon clinic at the BRONZE Clinic starting at 12:30 pm.
- Wednesday: These days are painfully early due to resident conferences starting at 6AM.
 General Surgery clinic at SPECIALTY Clinic starting at 8:00/8:15 AM. WEAR OR BRING
 CLOTHES FOR CLNIC AND CONFERENCE TODAY REGARDLESS OF WHICH SERVICE YOU
 ARE ON. Vascular Surgery has cath lab procedures often all day.
- **Thursday:** General Surgery has Colonoscopy Clinic in the morning and OR in the afternoon. Vascular Surgery has 7 AM conference and OR cases sometimes in the afternoon.
- Friday: Vascular Surgery clinic at SPEACIALTY clinic starting at 8:00/8:15. WEAR OR BRING DRESS CLOTHES FOR CLINIC TODAY REGARDLESS OF WHICH SERVICE YOU ARE ON.
- **Weekends:** One student needs to be present to pre-round and help write notes. You are usually done by 9:30 AM, rarely later than 11 AM.

6. WRITING NOTES

- Use your CPRS account and then change the author of the note to one of the interns and when you have completely finished the note to the best of your ability, click 'save without signature'. This will put the note in the resident's inbox to update/sign.
- Find the patient → click on the "Notes" tab → click on "New Note" →
- For rounds: You'll use the "Co-General Surgery Inpatient Note" or "Co-Vascular Surgery Inpatient Note" as your template. This note template is used for ALL patients (on primary service and with consults).
- For Clinic: You will use the "Co-General (Vascular) Surgery Clinic F/U Note" if the patient is returning for post-op or follow-up. You will use the "Co-General (Vascular) Surgery H&P/Pre-op Note" as your template if the patient is being scheduled for

- surgery. In this case, a resident needs to be notified to help obtain consent, place pre-op orders and complete other forms for scheduling.
- **For Clinic:** Please DOCUMENT appropriately. This sounds self-explanatory but bears emphasizing. Also, if you write a note (which is greatly appreciated), place the INTERN who is with you as the author of your note (do NOT write a note under your chief's name unless told specifically to do so). Since you cannot place orders, please be thorough with your plan so that the intern who reads your note (possibly 8 hours later) knows EXACTLY what the attending wanted.

7. VASCULAR CLINIC

Common problems you will see:

- **Peripheral vascular disease:** Check peripheral pulses. If a patient does not have pedal pulses, please check for femoral pulses.
- Carotid stenosis: Ask about TIA/Stroke-like symptoms and any history of prior stroke,
 e.g., weakness, numbness, tingling, facial droop, changes in speech or vision,
 specifically, amaurosis fugax (curtain-like vision loss). AND DO A BASIC NEURO EXAM:
 cranial nerves, pupils, and any facial droop should be recorded. Some of these patients
 have had a stroke in the past and it is important to establish their baseline status,
 including strength in their arms and legs.

Please ask all patients if they are on ASA, Plavix, and a statin (Check their med list and confirm that they are on one or more). Ask all patients if they are smokers now or in the past.

8. GENERAL SURGERY CLINIC

Common problems you will see:

- **Hernias.** Know as many of the different types of hernias that you can, because if you are in the OR there is a good chance someone is going to ask you about ALL of them.
- Colon polyps/cancer. When was last colonoscopy? What was found? (pathology reports can be found under Tools → Radiology/Imaging → Vista imaging display), any symptoms, e.g., blood in stool (bright red vs black), history of constipation, family history?
- **Gallbladder.** Anatomy is key here.
- **Hemorrhoids.** These exams should be deferred for when you are with an attending. Remember to ask about specific symptoms: bleeding, itching, etc.

C. ADVICE

Above all else, please try to "own" your patients and be a member of the team. If you know that we have a patient who needs a dressing changed in the morning (which, if they have a dressing, that's usually when we change it), then you will be a life-saver and deemed "proactive" and "amazing" if you have gauze, Kerlix, tape and scissors with you. Or on vascular surgery, a Doppler is used often daily on rounds. Always have lube in your pocket. If you have any questions or concerns at any moment about what you are to be doing or where you are to be, PLEASE ASK (pages and calls are welcome). When in doubt, listen to that wholesome little

voice in your head, "I should probably just go down to Same Day Surgery since I can't find my chief or the intern and I think we have a case today..." instead of listening to that louder, sleepy, and over-riding voice that says, "Just stay put and later when asked say, 'I didn't know what to do'". You become a part of the team when you decide that's what you want to be.

XII. APPENDIX E

A. ORIENTATION TO INFECTION PROTECTION

Students are required to attend orientation to infection protection in Columbia and/or Springfield. Before doing procedures, students should make sure they have supervision and information about safe techniques. Students in Columbia should call Work Injury Services at 573-884-9924 Monday- Friday, from 7:30 a.m. to 4:00 p.m., immediately following blood/body fluid exposure that may lead to transmission of blood-borne pathogens and infection. After these hours, the student should call the hospital operator and ask for the House Manager to notify them of the exposure. If deemed high risk, infectious disease service will be consulted. Students at CoxHealth in Springfield should contact infection prevention at 417-269-4031. Students at Mercy in Springfield should contact Infection Prevention at 417-820-2797. Prophylaxis must be given rapidly to achieve maximum protection. Students are expected to take responsibility for protecting their patients and co-workers if they become ill. Information is available from the departments or by calling Infection Control. Information about infection 29 protection for students on away rotations should be a component of orientation to each away rotation. Students should clarify procedures at the time of orientation and prior to entering patient areas at any institution. Questions may be directed to the Associate Dean for Student Programs.

B. EXPOSURE TO BODY FLUIDS

Blood/body fluid exposure could lead to transmission of blood-borne pathogens and infection. Prophylaxis may need to be given rapidly to achieve maximum protection. Before doing procedures, students should make sure they have supervision and information about safe techniques.

Students are expected to carry health insurance that will cover the evaluation and treatment of injuries, including blood/body fluid exposures, incurred during their educational experiences in the classroom, hospitals, and clinics.

For additional information, please see the student handbook for the current academic year.

https://medicine.missouri.edu/offices-programs/education/student-resources

C. OTHER INJURY

Students may experience other physical injury as a result of accidents or other events while on clinical rotations. They should seek care from the nearest emergency room in life-threatening situations.

Each facility or clinic will have their own rules and procedures that they request students to follow. Please check with the facility/clinic's supervisor for current procedures to report a work related injury.

For additional information, please see the student handbook for the current academic year.

https://medicine.missouri.edu/offices-programs/education/student-resources