

Phase 2 Surgery Policies Clerkship / ROME / MILE 2024-2025 Academic Year (Class of 2026)

Clerkship Orientation

Prior to the first day of the surgical clerkship, Phase 2 students will be emailed video links for viewing 'General Orientation' and 'Intro to Surgical Ethics' recordings via a flipped-classroom format. These will be followed by a Zoom conference Orientation debrief and Ethics case discussion session that will be scheduled within the first few days of the rotation. Students will meet with administrative staff and/or faculty separately regarding specific details relevant for their assigned campus.

Clerkship Objectives

Objectives and modules for specific surgical subjects have been prepared by the American College of Surgeons (ACS) and the Association for Surgical Education (ASE) Medical Student Core Curriculum Essential Content for Surgery Clerkships and are available at the following link:

<https://www.facs.org/education/program/core-curriculum>

These comprise expected knowledge, skills, and goals for each specific subject. The Department utilizes these objectives throughout the Phase 2 Surgery Clerkship.

SMHS Objectives

The SMHS objectives of the Phase 2 surgery clerkship are to assist the student in developing the following abilities and skills:

1. The **practice** of applying basic science disciplines to clinical situations.
2. To **recognize diseases** or conditions that are treated surgically. This includes understanding the normal physiology, pathophysiology and changes incurred by surgical treatment. The student will be expected to understand the natural history of surgical diseases and the normal physiology in individuals not affected.
3. To **develop problem-solving skills** based on a complete history, performance of a complete physical examination and collective interpretation of additional data such as laboratory and X-ray results.
4. To **recognize** common surgical **emergencies** and the appropriate responses to these emergencies.
5. To **develop** basic manual skills required in effective patient care.
6. To **develop self-assessment skills** that will provide the student with appropriate input or awareness as to his or her performance on the clerkship objectives.
7. To **develop and maintain personal characteristics**, attitudes and ideals appropriate for the physician and surgeon. This should include an awareness of personal strengths, weaknesses, appearance, reliability, integrity, honesty, and the ability to interrelate with other individuals.
8. To **develop** skills enabling an effective interaction with patients, colleagues, nurses, and other health care professionals. This includes the development of communication skills that are necessary for the exchange of information concerning patients and the ability to cooperate with other disciplines in patient care.
9. **Recognize** that diverse cultural, religious, and socioeconomic factors can affect both the provider's approach and the patient's response to surgical care.
10. Students will **demonstrate** professional behavior in both the inpatient and outpatient settings. This is in line with our medical school's pillars of excellence and with medical licensing standards in the United States and abroad
11. Following **self-directed learning**, the student will be able to:
 - a. Define microsatellite instability and describe its importance in colorectal cancer
 - b. Describe the body's mechanisms of meeting energy needs during prolonged fasting
 - c. Identify the inheritance of the BRCA gene and describe its role in breast cancer
12. After attending weekly mortality conferences, students will be able to **discuss** expected and unforeseen complications associated with surgical procedures, with an aim to improve quality of future care.
13. Students will be able to **discuss** ethical principles and fiduciary duties relevant to surgical care.

Clinical Role

Phase 2 surgical clerkship students will assume a significant role as part of the surgical team with supervised responsibility in the care of all patients on the service. The student is expected to perform a complete and/or focused history and physical examination on each patient assigned, as appropriate, unless otherwise indicated by the attending surgeon. In addition, to document baseline performance, all students are required to submit a checklist form completed by mid-clerkship feedback documenting supervision of a history, physical exam, and their knot tying and suture skills. This form must have signatures by any faculty, resident, or advanced practice provider who has observed proper performance and conduct of these skills. Appropriate supervision is required for all procedures according to UND policy <https://med.und.edu/policies/files/docs/4.21-clinical-supervision-medical-students-5.22.pdf>

The Phase 2 surgical student is responsible for confirming with the attending surgeon or resident and operating room for the time of scheduled surgical procedures. All students are excused from clinical duties to attend assigned Seminars and Examinations that are designated as mandatory. All students are expected to participate in scheduled teaching ward rounds that do not interfere with other responsibilities. These times will be designated on the weekly schedule. In-person or video-conference attendance at Surgical Morbidity and Mortality (M&M) conference Surgery Grand Rounds is mandatory, and students will not be excused except for illness or other special circumstances.

Phase 2 students rotating on Surgery will be evaluated on the basis of multiple experiences. Clinic attendance is mandatory for proper exposure to the pre-operative and/or post-operative phases of care, and the student is expected to work up two or more patients per week as assigned by preceptors, as appropriate for the setting of the rotation. When assigned a patient with a specific surgical disease or condition, the student will be expected to be able to relate pertinent surgical information regarding the disease or condition by the end of the clerkship. Evaluation of the student's performance and cognitive skills will be accomplished through the use of objectives seminars, student case conferences, instructor ratings, and by examinations as outlined in the Department of Surgery evaluation policy.

Disparities in Delivery of Surgical Care:

Students should be mindful to issues of disparate care amongst our populations at urban and rural sites, and can use the following areas to help organize these concerns, focusing on patient factors, provider factors, clinical quality, system/access issues, postoperative care, and rehabilitation (Torain *et al.* JACS 2016).

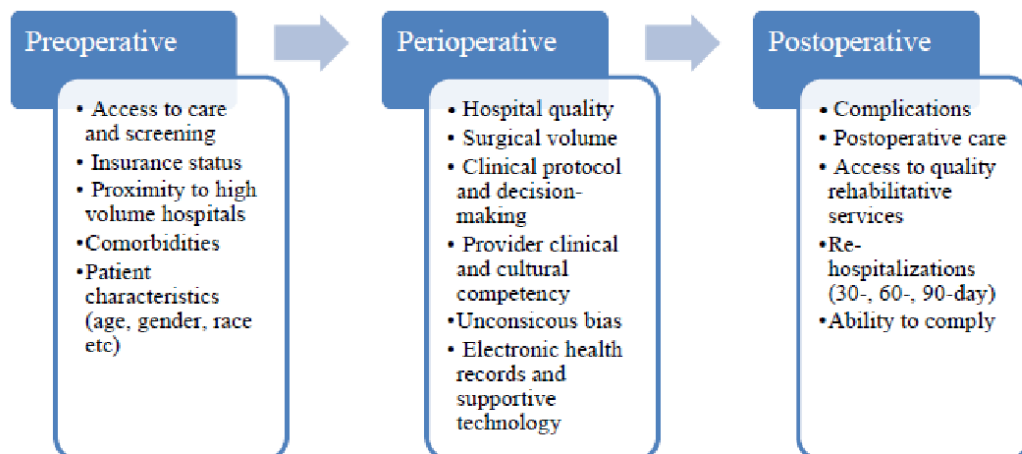


Figure 1. Potential avenues of surgical disparities within the health care trajectory.

Special Assignments

These assignments must be completed within the **first half** of the clerkship at the time of scheduled mid-clerkship feedback assessments. These assignments will not be graded but must be completed in order to pass the clerkship. Note that mid-clerkship feedback will be scheduled in the Fall for students with longitudinal curricula (MILE and ROME).

Observation Checklist

- Prior to the end of the fourth rotation week, students will submit a checklist form documenting supervision of their history, physical exam, knot tying, and suture skills. This form must have signatures by any faculty, resident, or advanced practice provider who has observed proper performance and conduct of these skills. A photograph or scan of this form can be emailed to marlys.peterson@und.edu.

Diversity Objective

- Prior to the end of your first rotation, students will submit a self-reflective narrative report about diversity in surgery. While this report can be highlighting any topic area, we ask the student to reflect on how the topic or specific example relates to the Framework for Surgical Disparities (see Figure; Torain *et al.* JACS 2016). This report should be a minimum of one paragraph and should be emailed to marlys.peterson@und.edu.

Basic Science Questions

Be prepared to answer these 3 questions during your Mid-Clerkship Feedback session:

1. What is microsatellite instability (MSI) and why is it important in colon cancer?
2. Surgery patients are frequently NPO for several days. Explain how the body can meet its energy needs without food for several days.
3. Describe the mechanism and inheritance of BRCA in breast cancer.

Call Schedule Policy

Students are expected to take call during the rotation, and the nature of this experience will depend on the rotation setting. Call will not exceed every fourth night or fourth weekend, on average. Call may be either in-house or from home, depending on the location. Each student should discuss facility-specific call policies upon arrival at each facility. On non-call nights, students may leave at 6:00 p.m. (and may only stay later if the student desires to do so, while also respecting duty hour policies).

The Department abides by the **UND SMHS Student Duty Hour Policy**

<https://med.und.edu/policies/files/docs/4.3-clinical-duty-hours-medical-students-2022.pdf>

Patient Encounter Logs

The student will be expected to use a smartphone or a computer to record an encounter log of patients' diseases, operations, and/or procedures. *These should be entered and updated on a weekly basis.* Clinical encounters can be designated as observed or participated. It is expected that the majority of patient encounters that are logged are performed at a participation level, which includes any level of participation in the perioperative phases of care, inclusive of preoperative clinic or emergency room evaluation, involvement in the operation, and/or involvement in the postoperative care. Note that trauma and acute care surgical patients include non-operative management and count as participation. While these patient encounters are not a component of the final grade, they will be used as a critique of the depth and spectrum of involvement in the rotation, and will be reviewed at the time of mid-clerkship feedback.

Failure to complete the patient encounters or to submit them as requested will result in an incomplete mark for the clerkship. Detailed instructions on the case log process will be given during orientation.

Surgery Clinical Encounter Requirements (Participated - not Observed)					
Patient type/clinical condition	#	Student Roles	Clinical setting	Diagnosis, Procedure or Management	Make-up opportunities for missed experiences
Abdominal/Gastrointestinal Surgery	15	Student participates in clinical evaluation and management including peri-operative, intra-operative, and post-operative care with faculty supervision.	Either	D, P, M	When inadequate experience is identified at the time of midclerkship feedback, students are either encouraged to seek out certain conditions or student will be assigned one day in a clinical setting in which that patient requirement can be met.
Breast, skin and soft tissue Surgery	5		Either	D, P, M	
Endoscopy/ Gastrointestinal blood loss	5		Either	D, P, M	
Orthopedics	0		Either	D, P, M	
Other Surgery	0		Either	D, P, M	
Trauma and Critical Care	2		Either	D, M	
Vascular/Cardiovascular/ Thoracic Surgery	5		Either	D, P, M	
Surgery	3	Suturing	Either	Participation	
Surgery	3	Knot tying	Either	Participation	

Observation vs. Participation: Observation is defined as, “the action or process of observing something or someone carefully or in order to gain information”. Participation is defined as, “the action of taking part in something”. For the purpose of the General Surgery Clerkship, please consider observation as passive (without interaction) and participation as active (with interaction). Participation thus includes all of the following examples of various direct and interactive learning activities:

- Being involved in the primary and secondary survey of a patient sustaining blunt injuries from a motor vehicle collision.
- Performing 2.5cm of the subcuticular skin closure for a mastectomy incision.
- Holding and operating a 30-degree camera during a laparoscopic cholecystectomy.
- Assessing and helping the team stabilize an upper GI bleed patient who does not require an operation.
- Being scrubbed in during a Whipple Procedure with your hands placed near the surgical field viewing procedural conduct and anatomy while being able to ask or answer questions about the case.
- Placing a Foley catheter with supervision prior to a long case, during which you have to leave prior to skin closure in order to attend a required lecture.
- Meeting a patient, reviewing their medical records, and attending their colonoscopy.
- Sitting in front of a monitor while unscrubbed (out of the way) but present (recognized by the team) during a robotic colectomy, enough to have anatomy or maneuvers pointed out to you, then scrubbing in for skin closure, and/or rounding on the patient while they are still inpatient.
- Being involved in any direct engagement with a patient in the preoperative and/or post-operative phases of surgical care.

For the purpose of Surgery Clerkship case logs, participation is not defined as performing the case, or assisting to the standards expected of Surgery Residents or Surgeons. Participation with minimum case numbers is required.

Alternate Activities: If a student is unable to achieve the required number of encounters, this concern should be addressed during mid-clerkship feedback. If the minimum number of encounters are not achievable, alternative activities include time with a different attending, time at a different (presumably urban) campus, and/or, as a last-resort, the use of online educational content (videos/modules) as determined by the Clerkship Director. The use of online content should be considered a last resort. The student is expected to be pro-active in meeting the minimum encounter requirement.

Evaluation Guidelines and Grading Policy

Guidelines for the evaluation of Phase 2 medical students are based upon the following principles:

- Understanding the workup and care for assigned patients is a major responsibility of the Phase 2 student.
- Clinical performance reflects attitudes, knowledge base, application of information, problem-solving skills, psychomotor skills, professionalism, and inter-relationships with peers, paramedical personnel, and faculty.
- Performance evaluations are achieved by using multiple evaluators who have sufficient exposure with the third-year student.
- Written objective tests measure only a sampling of knowledge or recall at a given time, but provide useful information regarding performance on assigned study materials.
- A pass/fail system will be used for oral exams, with provision of formative feedback.
- Seminars and conferences are mandatory and will take priority over all other activities. Attendance at seminars will be taken and absenteeism may be grounds for failure of the clerkship.

Student Seminars

Each student will deliver one 30-minute patient-focused student seminar (20-minute case presentation with 10-minute discussion). These will be scheduled beginning the second week of the rotation and will be held via video conference on Tuesdays at 4:00 p.m. Each student will select a surgical disease or procedure from a list of Core Categories (*see appendix A*). The student will review the current surgical literature regarding the clinical problem addressed in the case and give a formal case presentation including PowerPoint slides and appropriate imaging studies.

Clinical Evaluations

Surgical faculty will evaluate students in writing at the end of the rotation. A student must achieve an average score of 70% or better to pass the rotation. Faculty will consider all aspects of clinical performance on their written evaluations. Clinical evaluations account for 50% of final grade.

Only those faculty who have had sufficient exposure to the student to adequately evaluate performance will complete a written evaluation. Students on the Northeast and Southeast campuses will also be evaluated by the Chief Resident from the surgical service to which they were assigned.

Any student who fails their clinical evaluation must remediate or repeat the clerkship.

Oral Exam

A 30-minute oral exam will be given the last week of the rotation and will include discussion of two case scenarios. The content of the exam may be drawn from your patient encounters on your case log or any subject from the list of Core Categories (*see appendix A*). The exam is graded **pass/fail** and accounts for 10% of the final grade.

Feedback on performance includes the following domains:

- **Information gathering:**
 - Obtains focused and pertinent information about the patient's medical history
 - Obtains focused and pertinent information about the patient's physical exam findings
 - Requests relevant and appropriate laboratory and radiologic diagnostic tests
- **Understanding Information:**
 - Presents an appropriate differential diagnosis.
 - Presents an appropriate assessment of the disease process.

- **Decision-making:**
 - Provides an appropriate management strategy for the patient.
 - Discusses elements of informed consent (indications, risks, and alternatives).
 - Discusses future care considerations for the patient, including any postoperative management, adjuvant therapies, and surveillance, if relevant.
- **Communication:**
 - Provides a clear picture of the situation and what is needed to be done next.
 - Asks for or provides information in a way that would put a patient/family at ease.

The student will not be required to know any “how” details of the step-by-step detailed procedural conduct of an operation, but should be familiar with relevant treatment strategies in respect to case management at a general provider level.

Quizzes

Seven weekly quizzes will be administered based on specific surgical topics (see Appendix B). Quizzes are graded and count **10% of the final grade**. Quizzes should be used as a formative learning tool to help keep up with reading and it is strongly recommended that one quiz be completed each week (by noon on the following Monday). You can complete these quizzes in whatever order you like, but must complete before the end of your Surgery clerkship rotation.

NBME Shelf Exam

This is a commercially-produced multiple-choice exam that comprises **30% of the final grade**. (See below.) It is given on the last day of the rotation. Results are usually available 3-4 days after the examination is given. One full study day is offered for preparation for the shelf exam.

- To ensure fairness in scoring over the course of the third year, scores for the NBME Shelf Exam will be normalized on a quarterly basis. This will offset the rise in scores normally observed in students taking the exam later in the year.
- The NBME adjusts the scores every 3 months, whereas our periods change every 2 months. Therefore, Periods 1 & 2 will be scored based on NBME's Quarter 1; Periods 3 & 4 will be scored based on NBME's Quarter 2; Period 5 will be scored based on NBME's Quarter 3; and Periods 6 & 7 will be scored based on NBME's Quarter 4.
- A student who has delayed the start of the third year, or taken a leave of absence during the third year, will have their NBME score normalized to the actual number of periods completed at the time of the exam.
- Any student who scores below the **passing score of 61** must repeat the NBME shelf exam. If a student fails a second time, they will be required to remediate the clerkship.

Final Grade

To pass the rotation the students must:

- Achieve a total of minimum of 70 points by combining
 - Clinical evaluations by faculty (50%)
 - Oral Examination (10%)
 - Quizzes (10%)
 - NBME Shelf Exam (30%)
 - Submission of case logs in a timely fashion (mandatory to pass)

Points for each component are assigned as follows:

- Clinical evaluations by faculty (Points = Average Clinical Score x .50)
- Oral Examination (pass/fail grading system, 10 points)
- Quizzes (1-10 point grading system – see table)
 - One quiz must be completed each week (due by noon the following Monday)
 - Students will be penalized 1 point for each late submission
- NBME Shelf Exam (see table)

Quizzes - Composite Score (Total of 7 quizzes)	Points
107-123	10
103-106	8
95-102	6
92-94	4
85-91	2
84 or less	0

NBME Percentile Score	Points
Above 85%	30
65 – 84%	28
45 – 64%	26
35 – 44%	24
25 – 34%	22
15 – 24%	20
6 – 14%	15
1 – 5%	0
Minimum passing score on NBME shelf exam = 61 points	

Remediation

Students must achieve a total of 70 points to pass the rotation, including a minimum average of 70% on the preceptor evaluations and a minimum of 61 points on the shelf examination.

Students who fail solely as result of achieving a score of less than 61 points on the shelf exam will be offered one opportunity to retake the exam and achieve a passing score. **The student will meet with the Clerkship Site Director to discuss a study plan and may be required to take a practice exam prior to their official retake exam.** Students who fail to achieve a passing score on the retake will be required to complete part or all of the rotation again.

Students who do not achieve a total of 70 points may be offered remediation as follows:

- If shortage of points is secondary to scoring deficits on quizzes, oral exam, and/or preceptor evaluations, the student may be required to remediate 4 weeks, and/or retake the quizzes or oral exam with the goal of achieving the minimum points required to pass.
- Students scoring less than an average of 70% on preceptor evaluations will be required to repeat the entire 8-week rotation and achieve a passing score on that rotation.

Faculty reserve the right to modify remediation offerings based on individual circumstances.

Honors

All evaluations and scores are forwarded to the Department Chair for review. Honors are awarded at the discretion of the Chair. Students who require remediation are not eligible for honors.

In order for a student to achieve Honors, they must:

- score an average of 85% or higher on their evaluations
- score at or above the 85th percentile on the NBME shelf exam, and
- pass the oral exam

Learning Disability

If a student is aware of a disability which may influence his or her learning or clinical performance, it is the student's responsibility to notify the clerkship coordinator of this disability prior to the start of the clerkship. If the student fails to inform the clerkship coordinator of his or her disability, it will be assumed that the student has no disability and the clerkship will proceed as normal. All information will be kept confidential.

Bias and Microaggressions

If a student has encountered any areas of concern with regard to unfair or unprofessional behaviors or attitudes directed from a patient, clinic staff, hospital personnel, residents, or faculty, it is requested this information be promptly directed to the attending, the Clerkship Director, and/or the Department Chair as appropriate. The Department of Surgery stresses the importance of maintaining a learning environment that fosters optimal delivery of high quality care in an equitable fashion.

<https://med.und.edu/policies/files/docs/3.12-and-2.5-learner-mistreatment-6.30.22.pdf>

Recommended surgical textbooks for the Weekly Quizzes and NBME Surgery shelf exam

- *American College of Surgeons (ACS) and the Association for Surgical Education (ASE) Medical Student Core Curriculum Essential Content for Surgery Clerkships and are available at the following link:*
<https://www.facs.org/education/program/core-curriculum>
- *TEAM (Trauma Evaluation and Management): Early Care of the Injured Patient.* ACOS. (current edition).
- *Cope's Early Diagnosis of the Acute Abdomen.* William Silen.

And your choice of these primary surgery texts:

- *Essentials of General Surgery.* Peter F. Lawrence. (paragraph format)
https://medund.primo.exlibrisgroup.com/permalink/01ODIN_UNF/cgt6p/alma9983730216306078
- *NMS Surgery.* Bruce E. Jarrell. (bullet point format)
https://medund.primo.exlibrisgroup.com/permalink/01ODIN_UNF/cgt6p/alma9983740159706078

Note: Hard copies of these books are also available on loan by the Surgery department

Appendix A

CORE CATEGORIES FOR SURGERY CLERKSHIP --- 3RD YEAR STUDENT PRESENTATIONS

Gastrointestinal Disease

Colon cancer

Appendicitis

Gastrointestinal bleeding

Diverticulitis

Small bowel obstructions

Inguinal hernia

Vascular

Peripheral Vascular Disease

Carotid Stenosis

Abdominal aortic aneurysm

Deep Vein Thrombosis

Claudication

Breast

Breast masses

Breast Cancer Screening

Endocrine

Thyroid nodules / cancer

Hepatobiliary

Cholecystitis / Choledocholithiasis

Pancreatic cysts

Kidney masses / cysts

Cholangitis

Gastroesophageal Reflux (GERD)

Chest

Lung nodules / Lung cancer

Trauma

Basic workup / Student ATLS

ENT

Unilateral neck mass

Cancers / Tumors

Skin

Skin Cancer

Appendix B

WEEKLY READING / TOPICS FOR SURGERY QUIZZES

Quiz I

- Covers Cope's textbook...read the book before attempting the exam.

Quiz II & III

- Abdominal masses
- Abdominal pain
- Abdominal wall and groin masses
- GI hemorrhage
- Vomiting, diarrhea, constipation
- Perianal problems
- Post-op complications

Quiz IV

- Chest pain and shortness of breath
- Leg pain
- Lung nodules
- Swallowing problems

Quiz V

- Breast
- Ear and nose
- Neck masses
- Soft tissue lesions
- Burns

Quiz VI

- Fluid and Electrolytes
- Acid-Base
- Post-op complications
- Non-healing wounds
- Shock
- Trauma

Quiz VII

- Altered neurologic status
- Back pain
- Asymptomatic patient with a positive test
- Scrotal pain and swelling
- Urinary complaints
- Transplantation