

ANTR 685  
**DIRECTED STUDY IN  
CLINICAL PROSECTIONS**

**CLERKSHIP ELECTIVE ROTATION SYLLABUS**

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*At Michigan State University College of Osteopathic Medicine (MSUCOM), we are constantly working to improve our curriculum and to meet accreditation guidelines. We need to meet the challenges of modern medicine that force us to innovate. While changes will generally be instituted at the beginning of the school year, changes may also be implemented semester to semester.*

*Please be mindful of the need to read your syllabi before beginning your rotation.*

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## **INTRODUCTION AND OVERVIEW**

ANTR 685 is a 3-credit hour (two-week) or 6-credit hour (four-week) elective course that provides students with an opportunity to deepen their understanding of human anatomy while gaining prosection/dissection experience. Students will independently complete prosections of select anatomical regions and/or isolated organs of human donors under the guidance of faculty from the Division of Human Anatomy. These prosections will later be used as anatomical teaching specimens in the Gross Anatomy Lab. A student may earn a maximum of 15 credits in all enrollments for this course.

### **ELECTIVE COURSE SCHEDULING**

#### Preapproval

- This course requires preapproval. The student must contact the IOR/CA via email with the following details of the rotation/rotation site when seeking preapproval:
  - Proposed dates of rotation.
  - Preferred campus (East Lansing, MUC, DMC).
  - Region(s) of interest.
- Confirmation of approval from the IOR is to be sent to [COM.Clerkship@msu.edu](mailto:COM.Clerkship@msu.edu) for final clerkship approval and scheduling.

#### Required Prerequisites

- This course requires the following prerequisite course(s):
  - ANTR/OST 510 or equivalent.

#### Course Confirmation and Enrollment

- The student must be an active student at MSUCOM.
- Student must complete five core rotations prior to any elective rotation.
- It is the student's responsibility to provide the elective site/rotation acceptance material to the [COM.Clerkship@msu.edu](mailto:COM.Clerkship@msu.edu) for MSU confirmation and scheduling.
  - MSUCOM clerkship confirmation is complete when the rotation is visible on the students Medtrics schedule.
- It is the student's responsibility to ensure enrollment prior to beginning any course/rotation.
  - Enrollment will be processed by the MSUCOM Registrar's Office upon clerkship confirmation.
  - Enrollment can be verified by the student by reviewing the Student Information System
- MSUCOM confirmation must occur at least 30 days in advance of the rotation.
- Once confirmed, the rotation may only be cancelled 30 days or more in advance of the start date.

### **ROTATION FORMAT**

In the 3-credit hour (two-week) rotation, the student will complete a prosection assignment(s) totaling 30 points.

In the 6-credit hour (four-week) rotation, the student will complete a prosection assignment(s) totaling 50-points. After the completion of the prosection assignment(s), the student will be expected to present a 30-minute oral seminar-style discussion to the public (faculty, lab personnel, and students). The seminar topic should be related to the anatomical region being prosected and is expected to draw information from at least two peer-reviewed journal articles covering recent innovative treatments encompassing clinical anatomy correlates/surgical techniques, or diagnostic imaging advances, or genetic/cell therapies, etc.

## GOALS AND OBJECTIVES

### GOALS

1. To provide students with hands-on prosection/dissection experience of the student's desired/selected anatomical region on donors and donor tissues.
2. To develop appropriate dissection techniques, including gaining experience and competence to manage dissection tools (which are often translatable to surgical techniques).
3. To develop team working skills with students, faculty, and staff in a professional manner.
4. To develop strategies for searching for and evaluating peer-reviewed publications pertaining to student's desired/selected anatomical region (4-week rotation only).
5. To annotate and review relevant peer-reviewed articles relating to student's desired/selected anatomical region (4-week rotation only).
6. To prepare and deliver a seminar-style presentation based on the reviewed literature (4-week rotation only).

### OBJECTIVES

1. Use appropriate dissection techniques for prosection of various tissues.
2. Demonstrate ability to work independently to complete the assigned prosection project.
3. List peer-reviewed publications related to their anatomical region of interest and identify studies of interest, such as recent advances in surgical techniques, diagnostic imaging, gene therapies, morphological variation, etc. (4-week rotation only).
4. Develop and deliver an oral seminar-style presentation integrating their prosection assignment with the peer-reviewed publications of their choosing (4-week rotation only).

### COMPETENCIES

1. Demonstrate a commitment to continuous improvement of teaching skills and techniques.
2. Recognize limits of personal knowledge and skill by consulting colleagues when necessary
3. Utilize current technologies, e.g., websites, online search engines, PDA-based programs, information services, and journals to locate health science literature.

## COLLEGE PROGRAM OBJECTIVES

In addition to the above course-specific goals and learning objectives, this clerkship rotation also facilitates student progress in attaining the College Program Objectives. Please refer to the complete list provided on the MSUCOM website (<https://com.msu.edu/>) and in the Student Handbook.

## REFERENCES

### REQUIRED STUDY RESOURCES

Desire 2 Learn (D2L): Please find online content for this course in D2L (<https://d2l.msu.edu/>). Once logged in with your MSU Net ID, your course will appear on the D2L landing page. If you do not see your course on the landing page, search for the course with the following criteria, and pin it to your homepage: **ANTR 685**.

If you encounter any issues accessing this D2L course, please email the CA (on the title page of this syllabus). It is your responsibility to make sure you have access to the course D2L page on the first day of the course.

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SUGGESTED STUDY RESOURCES

Recommended Texts

The MSU library has several free electronic and non-electronic resources  
(<https://libguides.lib.msu.edu/anatomy-resources>).

**ROTATION REQUIREMENTS**

REQUIREMENT	SUBMISSION METHOD	DUE DATE Please refer to D2L for actual (month/day) due dates
Orientation	Schedule a meeting with your assigned faculty advisor.	First Week of Rotation
Prosection Project(s) and "Checkout"	Oral presentation ("checkout") with assigned faculty advisor.	Last Day of Rotation
Peer-Reviewed Journal Article Annotations (4-week only)	Annotations will be submitted to assigned faculty advisor.	Last Day of Third Week of Rotation
Seminar-Style Presentation (4-week only)	Seminar-style presentation over Zoom; given to faculty, staff, and students.	Last Day of Rotation
Attending Evaluation of Clerkship Student	Students must select their attending physician as directed within the rotation description in Medtrics. At the start of the last week of the rotation, students will need to request an evaluation in Medtrics. By requesting an attending evaluation from their assigned attending physician, the attending physician will receive an automated email link connecting them to their assigned Attending Evaluation within Medtrics. Attendings will be able to electronically access and submit the forms on behalf of their students.	Last Day of Rotation
Student Evaluation of Clerkship Rotation	Students will submit their rotation evaluations electronically at the conclusion of every rotation by accessing the Medtrics system: <a href="https://msucom.medtricslab.com/users/login/">https://msucom.medtricslab.com/users/login/</a> . By the last week of each rotation, students will receive an automated email link connecting them to their assigned evaluation. Students can also access pending evaluations on the 'Home' or 'Evaluations' tabs within their Medtrics accounts.	Last Day of Rotation

## ORIENTATION

The student will undergo an orientation with their assigned faculty advisor prior to beginning their rotation. The student will schedule this orientation with their assigned faculty member.

## PROSECTIONS PROJECT AND "CHECKOUT"

The student must complete a series of prosection projects that total 50 points (for a four-week rotation) or 30 points (for a two-week rotation) in assignment value. The oral presentation ("checkout") to faculty advisor must be completed during the last week of the rotation and should identify required structures, discuss structure function (where applicable), and discuss pathology and/or structure variation (where applicable).

## PEER-REVIEWED JOURNAL ARTICLE ANNOTATIONS

For students completing the four-week rotation only. The student must annotate two peer-reviewed journal articles related to the anatomical region being prosected. One article should address how pathologies of the anatomical region have been historically treated (e.g., surgery, diagnostic testing, pharmaceuticals, etc.) and one article should address a recent innovation in the treatment of a condition related to the anatomical region (e.g., new surgical technique, therapeutic intervention, advancements in imaging, etc.). The annotations should be sent to the faculty advisor by the last day of the third week of the rotation.

## SEMINAR-STYLE PRESENTATION

For students completing the four-week rotation only. The student will give a presentation to the public (faculty, lab personnel, and students). The topic should be related to the anatomical region prosected and draw information from the two peer-reviewed journal articles annotated by the student. Presentations should include an overview of the anatomical region, introduction to seminar topic, discussion of two peer-reviewed journal articles, discussion of impact on the field. The presentation should be 30 minutes in length, plus 5-10 minutes for questions. The presentation should be given during the last week of the rotation and will be scheduled by the faculty advisor or instructor of record.

## ROTATION EVALUATIONS

### Attending Evaluation of Student

Attending Evaluation of the Student is completed electronically via Medtrics by the supervisor designated within the Medtrics rotation description. To initiate this evaluation, each student must select their attending physician as directed within the rotation description in Medtrics. Students will receive an email from Medtrics to select the attending 7 days prior to the end of the rotation. Should your rotation lack a rotation description or if you have any questions, please contact [COM.Clerkship@msu.edu](mailto:COM.Clerkship@msu.edu). Upon selecting the attending physician directed within the Medtrics rotation description, the attending physician will receive an automated email link connecting them to their assigned Attending Evaluation within Medtrics.

Attendings will be able to electronically access and submit the Attending Evaluation of the Student. Attendings will access the electronic form within Medtrics by selecting the email link on a smart device. No login (username/password) will be required for attendings to access their pending evaluation(s) assigned to them. After the electronic form has been submitted by their attending, students can review the Attending Evaluation of the Student that were completed by visiting the 'Evaluations' module (in the 'About Me' tab) of their Medtrics profiles.

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Students are encouraged to seek formative/verbal feedback on their performance at least weekly. Students are also encouraged to discuss the Attending Evaluation of the Student with the supervisor completing the evaluation.

Any evidence of tampering or modification while in the possession of the student will be considered “unprofessional behavior” and will be referred to the Committee on Student Evaluation (COSE).

Grades are held until all rotation requirements are received. Students are required to ensure their rotation requirements are completed correctly.

### Student Evaluation of Clerkship Rotation

Students will submit their rotation evaluations electronically at the conclusion of every rotation by accessing the Medtrics system: <https://msucom.medtricslab.com/users/login/>. By the last week of each rotation, students will receive an automated email link connecting them to their assigned evaluation for the respective rotation. Students can also access their pending evaluations on the ‘Home’ or ‘Evaluations’ tabs within their Medtrics accounts.

### Unsatisfactory Clinical Performance

The Instructor of Record will review/investigate a student’s performance on a rotation when a concern is raised by the supervisor(s), and/or when the Attending Evaluation of Clerkship Student contains any below expectation marks within the professionalism area, any unsatisfactory written comments, or a total of two or more below average marks on the evaluation. After investigations, the Instructor of Record will determine a final grade for the student.

Professionalism concerns, as well as accolades, will also be referred to the MSUCOM Spartan Committee Clearinghouse for resolution, per MSUCOM’s Common Ground Framework for Professional Conduct.

## CORRECTIVE ACTION

If a student does not successfully complete the rotation requirements of the course, the student will receive an NGR grade and be permitted to go through a ‘corrective action’ process.

The following assignments are eligible for corrective action and will be due no later than 14 days after the last day of the rotation at 11:59pm:

- Prosecution project and “checkout.”
- Seminar-style presentation (4-week rotation only).

The student is responsible for contacting the Course Assistant (on the title page of this syllabus) if they believe missing assignments were reported in error, or if they are unclear about the corrective action process.

While it is the responsibility of the student to ensure that the Attending Evaluation of Clerkship Student is completed, this requirement may extend beyond the corrective action deadline.

If a student **successfully completes** the corrective action process, as determined by the IOR, the student will receive credit for the deficient academic grading requirement(s) and be eligible for a change in rotation grade (from NGR to Pass, pending the Attending Evaluation of Clerkship Student).



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As determined by the IOR, the student will receive an N grade for the course if all assignments and the corrective action process are **not completed** successfully within 14 days after the last day of rotation at 11:59pm (except for the Attending Evaluation). Additionally, a letter of unprofessional behavior for late submission of assignments will be sent to the MSUCOM Spartan Community Clearinghouse.

### BASE HOSPITAL REQUIREMENTS

Students are responsible for completing all additional requirements set by the hospital/clinical site at which they are completing a rotation. Students are not responsible for reporting to MSUCOM the results of any requirements that exist outside of those listed above.

## **STUDENT RESPONSIBILITIES AND EXPECTATIONS**

During the rotation, the student is required to meet the following clinical and academic responsibilities.

### ATTENDANCE

The student is expected to spend approximately 30-40 hours per week in the prosection lab. Students may prosect during any hours the lab is open. A campus specific schedule will be provided to the student.

### ATTIRE

Professional lab attire and Personal Protective Equipment (PPE) are required for all individuals who enter the anatomy laboratory. The following PPE is expected:

- Closed toed shoes.
- Surgical scrubs.
- Lab coat or disposable gown (can be provided to you).
- Safety glasses certified to ANSI Z87 (**NOTE:** Prescription eyeglasses are not considered safety glasses unless they have both side shields and shatter resistant lenses) (can be provided to you).
- Disposable nitrile\* gloves (**NOTE:** As some individuals are allergic to latex, latex gloves are NOT allowed in lab) (can be provided to you).

### ETIQUETTE

The student is expected to always adhere to professional and ethical behavior during the course. This includes:

- The student must indicate without delay if the need to withdraw from the rotation is necessary.
- Careful dissection of the cadaveric material (dissection tools will be provided to you).
- Respect for donors in the lab and outside of lab.
- ABSOLUTELY NO photography/video of donors or donor tissues.
- ABSOLUTELY NO visitors or unauthorized persons in the lab.
- ABSOLUTELY NO food or drink the anatomy lab or classroom.

## **MSU COLLEGE OF OSTEOPATHIC MEDICINE STANDARD POLICIES**

The following are standard MSUCOM policies across all Clerkship rotations.

### CLERKSHIP ATTENDANCE POLICY

MSUCOM requires student participation in clerkship rotations and clinical activities with consistent attendance to acquire the skills and knowledge necessary for successful program completion. This policy will define the policy and procedures regarding absences for clerkship activities. [Clerkship-Absence-Policy.pdf \(msu.edu\)](#)

## POLICY FOR MEDICAL STUDENT SUPERVISION

The MSUCOM curriculum includes required clinical experiences in a variety of clinical learning environments. The Medical Student Supervision Policy outlines all supervision agreements and expectations. [Clerkship Medical Student Supervision Policy.pdf](#)

## MSUCOM STUDENT HANDBOOK

The Student Handbook is published electronically by MSUCOM for students in the Doctor of Osteopathic Medicine program. This handbook does not supersede other Michigan State University or College of Osteopathic Medicine policies, regulations, agreements, or guidelines.

<https://osteopathicmedicine.msu.edu/current-students/student-handbook>.

## COMMON GROUND FRAMEWORK FOR PROFESSIONAL CONDUCT

The Common Ground Framework provides the MSUCOM community with a reminder of the unity of mind, body, and spirit that underlines the field of osteopathic medicine. The framework is a set of guiding, foundational principles that underpin professional conduct and integrity and applies to all professionals at work within the shared college community, independent of their specific roles or responsibilities. <https://osteopathicmedicine.msu.edu/about-us/common-ground-professionalism-initiative>

## MEDICAL STUDENT RIGHTS AND RESPONSIBILITIES

The rights and responsibilities of students enrolled in MSUCOM are defined by the medical colleges of Michigan State University, including the College of Osteopathic Medicine, the College of Human Medicine, and the College of Veterinary Medicine. Students enrolled in the professional curricula of these colleges are identified as “medical students.” These colleges collectively define “Medical Student Rights and Responsibilities” (MSRR). This document addresses academic rights and responsibilities, governance, procedures for complaints, due process, and other topics. The current version is available on the MSU Spartan Life website at the address below: <http://splife.studentlife.msu.edu/medical-student-rights-and-responsibilities-mssr>

## MSU EMAIL

MSU email is the official communication from faculty and staff to students and students are responsible for checking it daily and maintaining their MSU email accounts so that messages can be received.

Forwarding MSU email to another email account or failure to check email are not valid excuses for missing a deadline or other requirements of the DO program.

Further, students must use secure email when working in a hospital, clinic, or other health care setting if discussion of patient information is involved. MSUNet (msu.edu) email is secure; many web-based email systems including Hotmail, Gmail, and Yahoo are not.

<https://osteopathicmedicine.msu.edu/current-students/student-handbook>.

## DUTY HOURS AND FATIGUE MITIGATION

The accreditation standards for graduate medical education programs include restrictions on the duty hours of residents. Additionally, institutions are expected to promote a clinical learning environment in which duty hours are monitored and strategies exist to mitigate the effects of fatigue. [Clerkship Duty Hours and Fatigue Mitigation Policy.pdf](#)

## STUDENT EXPOSURE PROCEDURE

A protocol has been developed by the University Physician to report incidents of exposure, e.g., needle sticks, mucous membrane exposure, tuberculosis exposure, etc., and it may be found here:

<https://osteopathicmedicine.msu.edu/current-students/clerkship-medical-education/injury-and-property-damage-reports>

Contact Associate Dean for Clerkship Education, Dr. Susan Enright ([enright4@msu.edu](mailto:enright4@msu.edu)), if exposure incident occurs.

## COURSE GRADES

**P/Pass** – means that credit is granted, and that the student achieved a level of performance judged to be satisfactory by the department according to the student's didactic and clinical performance.

**NGR/No Grade Reported** – means that a final grade ('Pass' or 'No Grade') cannot be determined due to one or more missing course requirements. The NGR grade will be changed to a final grade once all the completed course requirements have been submitted to and processed by MSUCOM (either to the department or Clerkship Team). An 'NGR' grade will NOT remain on a student's transcript.

**N/No Grade** – means that no credit is granted, and that the student did not achieve a level of performance judged to be satisfactory by the department according to the student's didactic and clinical performance.

### N Grade Policy

Students who fail this rotation will have to repeat the entire rotation and fulfill all (clinical and academic) requirements.

## STUDENT ACCOMMODATION LETTERS

Michigan State University is committed to providing equal opportunity for participation in all programs, services, and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities (RCPD) at 517-884-RCPD, or on the web at [www.rcpd.msu.edu](http://www.rcpd.msu.edu). Once a student's eligibility for (clinical and/or testing) accommodation(s) are determined, the student may be issued an Accommodation Letter. Students must present their letter to the Clerkship Team ([COM.Clerkship@msu.edu](mailto:COM.Clerkship@msu.edu)) at the start of the semester in which they intend to use their accommodations (for tests, projects, labs, etc.). Accommodation requests received after the semester onset will be honored whenever possible.

If modifications, updates, or extensions to an existing letter are made after the semester begins, it is the responsibility of the student to submit the newest version to the Clerkship Team if he/she intends to utilize the accommodation going forward.

## SUMMARY OF GRADING REQUIREMENTS

Requirement	Submission Method	Pass	No Grade Reported	No Pass
Orientation	Schedule meeting with assigned faculty advisor	Completed in first week of rotation.	Will be the conditional grade until all requirements of this rotation are met.	Failure to schedule meeting with faulty advisor.
Prosection Project(s) and "Checkout"	Complete all required prosection projects and successfully schedule and complete a project "checkout" (oral presentation) for each.	2-week rotation: complete prosection project(s) totaling 30-points  4-week rotation: complete prosection project(s) totaling 50-points	Will be the conditional grade until all requirements of this rotation are met.	<ul style="list-style-type: none"> <li>• Failure to complete the number of prosection points (30-points for 2-week rotation; 50-points for 4-week rotation) within 14 days from the end of the rotation.</li> <li>• Failure to complete checkout with faculty member within 14 days from the end of the rotation</li> <li>• Anatomy lab professionalism violation.</li> </ul>
Peer-Reviewed Journal Article Annotations (4-week only)	Can be submitted through email to assigned faculty advisor.	Annotations of at least 2 peer-reviewed publications.	Will be the conditional grade until all requirements of this rotation are met.	Failure to complete and submit peer-reviewed annotations to faculty advisor.
Seminar-Style Presentation (4-week only)	Presentation given over Zoom to faculty, staff, and students on topic agreed upon with faculty advisor.	Completed by last day of rotation.	Will be the conditional grade until all requirements of this rotation are met.	Failure to complete a seminar-style presentation over Zoom within 14 days from the end of the rotation

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Requirement	Submission Method	Pass	No Grade Reported	No Pass
Attending Evaluation of Clerkship Student	Attendings receive an automated email link connecting them to their assigned evaluation(s) within Medtrics, where they may access and submit the electronic form(s) directly	<ul style="list-style-type: none"> <li>• Student may receive “Below Expectations” in up to one (1) subcategory.</li> <li>• Overall categories must receive “Meets Expectations” or “Exceeds Expectations”</li> </ul>	Will be the conditional grade until all requirements of this rotation are met	<ul style="list-style-type: none"> <li>• Receives two (2) or more “Below Expectations” within the subcategory sections.</li> <li>• Receives comments that indicate below expectations of performance.</li> <li>• See Unsatisfactory Clinical Performance above</li> </ul>
Student Evaluation of Clerkship Rotation	Can be accessed and submitted electronically by students within the dashboard of their Medtrics profiles	Completed 100% by 11:59 pm the last day of the rotation	Will be the conditional grade until all requirements of this rotation are met.	Failure to complete and submit within 14 days from the end of the rotation