OST 615
Biomedical Research

CLERKSHIP ELECTIVE ROTATION SYLLABUS

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At MSUCOM, we are constantly working to improve our curriculum and to meet new AOA 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 rotations.
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INTRODUCTION AND OVERVIEW

Biomedical Research Clerkship OST 615 is a 6-credit elective that provides students with biomedical research experience. Directed research enables medical students to test and compare different theories and approaches and explore different methods in order to determine better modalities for patient care and therapy. Students are enrolled in 6 credits (40 hours’ research per week for 4 weeks). Research Clerkships may not be done simultaneously with any other clerkship. Students may enroll for OST 615, a total of 3 times for up to 18 credits. [https://com.msu.edu/info/research-scholarly-activity/request-research-credits/clerkship-ost615](https://com.msu.edu/info/research-scholarly-activity/request-research-credits/clerkship-ost615)

ELECTIVE COURSE SCHEDULING

Preapproval

- This course requires preapproval from the College of Osteopathic Medicine Research Office. The student must contact the Research Office via email (com.research@msu.edu) with the following details mentioned below and on the following webpage ([https://com.msu.edu/info/research-scholarly-activity/request-research-credits/clerkship-ost615](https://com.msu.edu/info/research-scholarly-activity/request-research-credits/clerkship-ost615)):
  - **30-day advance application approval required** (applies to a rotation add, change or cancellation) with the following documents:
    - After formalizing an agreement with a research mentor, complete the OST 615 Research Proposal Form and send to the College of Osteopathic Medicine Research Office.
    - Research mentor must provide a description of the project and details regarding the student’s role on the project including the source of funding for the project if it is funded.
    - Student must provide their resume or CV.
    - Student or research mentor must provide the project's [MSU IRB Approval Letter](https://com.msu.edu/info/research-scholarly-activity/request-research-credits/clerkship-ost615) for Human Subjects research.
    - Student must provide documentation certifying completion of MSU Human Research Protection Training if the research involves human subjects. Students receive a certificate of completion for this training and must provide an electronic copy to the College of Osteopathic Medicine Research Office.
    - Student or research mentor must provide the project's [MSU AUF Approval Letter](https://com.msu.edu/info/research-scholarly-activity/request-research-credits/clerkship-ost615) if the research involves animals.
    - Student must provide documentation certifying completion of the IACUC tutorial if the research involves animals. Students receive a certificate of completion for this training and must provide an electronic copy to the College of Osteopathic Medicine Research Office.
  - Confirmation of approval from the Research Office is to be sent to COM.Clerkship@msu.edu for final clerkship approval and scheduling.

Required Prerequisites

- This course does not require any prerequisite courses.
Course Confirmation and Enrollment
- The student must be an active student at Michigan State University College of Osteopathic Medicine (MSUCOM).
- Student must complete five core rotations prior to any elective rotation.
- The student must receive MSUCOM confirmation and enrollment prior to beginning any elective rotation.
  - Once the student receives rotation acceptance from the host site, students must provide the elective application and host site approval to COM.Clerkship@msu.edu for MSUCOM confirmation and scheduling.
  - MSUCOM confirmation and enrollment is complete when the rotation is visible on the student's schedule.
  - MSUCOM confirmation must occur at least 30 days in advance of the rotation.

Rotation Format
This rotation has been designed to provide an experiential research experience. Depending on the type of research, each week could be spent: working in a lab for translational and molecular research, working on a computer/laptop for bioinformatics and data science research, working and interacting with patients for clinical research, and working in the community for community-based and/or public health research.

Goals and Objectives

Goals
1. Provide biomedical research experience
2. Basic Science, translational, bioinformatics/data science research, clinical research, community-based and/or public health research may be pursued in agreement and under supervision of the Research mentor.

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.
ROTATION REQUIREMENTS

<table>
<thead>
<tr>
<th>REQUIREMENT</th>
<th>SUBMISSION METHOD</th>
<th>DUE DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Student Report on Research</td>
<td>Email report to <a href="mailto:com.research@msu.edu">com.research@msu.edu</a></td>
<td>Last Day of Rotation</td>
</tr>
<tr>
<td>The Research Mentor Student Evaluation</td>
<td>Email evaluation to <a href="mailto:com.research@msu.edu">com.research@msu.edu</a></td>
<td>Last Day of Rotation</td>
</tr>
</tbody>
</table>

ROTATION EVALUATIONS

Student Report on Research

Student must provide a report on the research. Provide a narrative report of approximately a page indicating what you did in qualitative and quantitative terms. Indicate the relevance of these findings to the hypothesis that the Investigator is addressing. In the light of your research, what in your opinion is the next step(s) in the research project? How many hours a week did you actually spend on the project? Student's must have their research mentor review and approve their final report before submitting it.

Email your report to your research mentor. Once they approve it, please forward the report along with the mentor’s approval to the College of Osteopathic Medicine Research Office. (com.research@msu.edu)

Students should actively seek feedback on their performance at the end of the course rotation. The research mentor must provide a student evaluation by email addressing the following questions:

- Did the student actively participate in the research project you assigned him/her?
- Did they carry out the research as you expected?
- Did they put in the hours they had agreed to?
- Were you satisfied with the student?
- Will the student continue working with you in the upcoming semester?
- Based on this experience, are you willing to have other medical students participate in short-term projects with you?

Student's receive credit at the end of the semester once the mentor approves the student report and once the research mentor evaluation is received, reviewed and approved by the College of Osteopathic Medicine Research Office. (com.research@msu.edu)
CORRECTIVE ACTION PROCESS
If a student does not successfully complete the rotation requirements of the course, the student will receive an ET 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:

The steps of the ‘Corrective Action’ process for OST 615 are as follows:

1. The student will be required to complete the number of research hours required to receive the credits for the course.
2. In case of unsatisfactory performance despite completion of required number of hours for the course, the Instructor of Record will have a discussion with the research mentor to assess any further work required by the student to receive the credits.

If a student does not complete the ‘Corrective Action’ process successfully, as determined by the Instructor of Record, the student will receive an N grade for the course.

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

Please note that while it is the responsibility of the student to ensure the Attending Evaluation of the Clerkship Student is completed, this requirement may extend beyond the corrective action date. Additionally, in the event of a COMAT failure on first attempt, the corrective action for the repeat COMAT may extend beyond 14 days.

As determined by the Instructor of Record, 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 (with the exception of the Attending Evaluation). Additionally, a letter of unprofessional behavior for late submission of assignments will be sent to the MSUCOM Spartan Community Clearinghouse.

If a student successfully completes the Corrective Action process, as determined by the Instructor of Record, the student will receive credit for the deficient academic grading requirement(s) and be eligible for a rotation grade change from ET to Pass (pending the Attending Evaluation of the Clerkship Student and COMAT score).

STUDENT RESPONSIBILITIES AND EXPECTATIONS

The student is expected to participate in conducting research (lab-based, translational, clinical, bioinformatics, etc.) according to the policies and regulations of the institution where the research
is conducted. The student will work on research for 40 hours per-week for the period of the OST-615 elective. The student is also expected to attend the lab. and/or the departmental research activities and meetings. The student is expected to maintain professionalism and collegial behavior throughout the rotation. Pro-active and self-directed learning is expected and will vary depending on the type of research and the nature of the project. The expectation is that the student contributes significantly to the research project that shall be reflected in the principal investigator’s evaluation and the student summary report at the end of the rotation.

**MSU COLLEGE OF OSTEOPATHIC MEDICINE STANDARD POLICIES**

The following are standard MSUCOM policies across all Clerkship rotations.

**ATTENDANCE POLICY**

**OVERVIEW**

Michigan State University College of Osteopathic Medicine (MSUCOM) requires student participation in clerkship rotations and clinical activities with consistent attendance to acquire the skills and knowledge that are necessary for successful program completion. Students are expected to take minimal time off outside of vacations already appearing in schedules and should only request time off in the rare events and circumstances outlined below.

Specific courses may have additional absence requirements from this general clerkship policy, and it is the student’s responsibility to adhere to these requirements according to the respective course syllabus.

**GENERAL POLICY**

- All absences from rotations must be **excused absences** obtained by completing the *Clerkship Program Excused Absence Request Form*.
  - Appropriate signatures must be obtained from both the attending physician and the student coordinator at the rotation site.
  - MSUCOM Assistant Dean for Clerkship Education must approve absences for prolonged illnesses, bereavement, research presentations/conferences, or absences exceeding the maximum time off any one rotation.
  - Once appropriate approval signatures are obtained, forms should be maintained for your records in the event they are requested or required at a later date.

- **Unexcused absences** are absences taken without the proper completion of the *Clerkship Program Excused Absence Request Form*, or absences outside of those listed in the Clerkship Attendance Policy. Unexcused absences are considered unprofessional and will result in a report to the Spartan Community Clearing House and/or the MSUCOM Committee on Student Evaluation (COSE).

<table>
<thead>
<tr>
<th>Length of rotation</th>
<th>Maximum number of days off</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 weeks</td>
<td>2 days</td>
</tr>
<tr>
<td>Length of rotation</td>
<td>Maximum number of days off</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>2 weeks</td>
<td>0 days</td>
</tr>
</tbody>
</table>

**Exception for residency interviews from October to January in Year 4 only**

A fourth-year student may be absent a total of 4 days on any 4-week rotation, or 2 days on any 2-week rotation during the months of October-January during Year 4 for interview purposes only. If interview absences exceed these totals, the student must request additional days off from the MSUCOM Instructor of Record (IOR) for the course/rotation by submitting a Clerkship Program Excused Absence Request Form to the Course Assistant (CA). Contact information for the IOR and CA are found on the first page of the respective MSUCOM course syllabus.
<table>
<thead>
<tr>
<th>Absence Type</th>
<th>Qualifications</th>
<th>Maximum number of days off</th>
<th>Details</th>
<th>Required Approval from Assistant Dean for Clerkship Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Day</td>
<td>Illness, Medical/Dental appointments, Wedding, family graduations (additional reasons must be discussed with the Assst Dean for Clerkship Education prior to request)</td>
<td>5 total days per year (individual events must comply with the max of 2 days off any 4-week rotation)</td>
<td>Vacations must be planned during allotted vacation time in schedule. Vacations are not acceptable personal day absences.</td>
<td>No</td>
</tr>
<tr>
<td>Jury Duty</td>
<td>Court documentation must accompany the Clerkship Program Absence Request Form.</td>
<td>N/A</td>
<td>Jury duty, when obligated, is not considered a personal day absence</td>
<td>Yes</td>
</tr>
<tr>
<td>Hospital-organized community events</td>
<td>Example: Special Olympic Physicals</td>
<td>N/A</td>
<td>These events would be considered part of the rotation and not a personal day absence.</td>
<td>No</td>
</tr>
<tr>
<td>Examination</td>
<td>COMLEX USA Level 2 CE/USMLE Step 2 CK/Canadian MCEE</td>
<td>1 day</td>
<td>Students should be reporting to rotation before/after examination</td>
<td>No</td>
</tr>
<tr>
<td>Examination</td>
<td>COMAT/NBME shelf examinations</td>
<td>Time required to complete exam</td>
<td>While on required/core rotations, no excused absences for any professional meeting will be allowed unless the student is presenting research in which they have participated. Required for request to Asst Dean for Clerkship Education: conference agenda, location, date of presentation, invitation, or confirmation of presentation by conference staff, proposed dates of absence.</td>
<td>Yes</td>
</tr>
<tr>
<td>Conference/Research Presentation</td>
<td>Research presentation on core rotation</td>
<td>Travel and presentation time only</td>
<td>Student must submit Clerkship Program Excused Absence Request Form and copy of conference agenda to the Assistant Dean for Clerkship Education to attend one (1) professional meeting on a 4-week rotation. Students cannot miss rotation days for a conference during a 2-week elective rotation.</td>
<td>Yes</td>
</tr>
<tr>
<td>Conference or research presentation while on an elective rotation</td>
<td>3 days on a 4-week elective rotation</td>
<td>Student must submit Clerkship Program Excused Absence Request Form and copy of conference agenda to the Assistant Dean for Clerkship Education to attend one (1) professional meeting on a 4-week rotation. Students cannot miss rotation days for a conference during a 2-week elective rotation.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Prolonged Illness, Bereavement, Maternity Leave</td>
<td>Medical related absence or bereavement</td>
<td>TBD</td>
<td>Students-contact the Assistant Dean for Clerkship Education to discuss time off rotations</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Clerkship Program Excused Absence Request Forms** - Once appropriate approval signatures are obtained; forms should be maintained for your records in the event they are requested or required at a later date.
STATEMENT OF PROFESSIONALISM
Principles of professionalism are not rules that specify behaviors but guidelines that provide direction in identifying appropriate conduct. These principles include the safety and welfare of patients, competence in knowledge and skills, responsibility for consequences of actions, professional communication, confidentiality, and lifelong learning for maintenance of professional skills and judgments. Professionalism and professional ethics are terms that signify certain scholastic, interpersonal and behavioral expectations. Among the characteristics included in this context is the knowledge, competence, demeanor, attitude, appearance, mannerisms, integrity, and morals displayed by the student to faculty, peers, patients, and colleagues in other health care professions.

Students are expected to conduct themselves at all times in a professional manner and to exhibit characteristics of a professional student.

STUDENT RIGHTS AND RESPONSIBILITIES
Each individual student is responsible for their behavior and is expected to maintain standards of academic honesty. Students share the responsibility with faculty for creating an environment that supports academic honesty and principles of professionalism. Proper relationship between faculty and student are fundamental to the college’s function and this should be built on mutual respect and understanding together with shared dedication to the education process. It is a fundamental belief that each student is worthy of trust and that each student has the right to live in an academic environment that is free of injustice caused by dishonesty. While students have an obligation to assist their fellow students in meeting the common goals of their education, students have an equal obligation to maintain the highest standards of personal integrity.

MSU Email
To facilitate communication from faculty and staff to students, students are required to have a functioning MSU email address. Students are responsible for checking their MSU email accounts daily and maintaining their MSU mailboxes 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 clinical education 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.

FACULTY RESPONSIBILITIES
It is the responsibility of the college faculty to specify the limits of authorized aid (including but not limited to exams, study aids, internet resources and materials from
senior students) in their syllabi, and it is the responsibility of students to honor and
adhere to those limits. Course instructors shall inform students at the beginning of the
semester of any special criteria of academic honesty pertinent to the class or course.

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.

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
(academic) requirements.

STUDENT EXPOSURE PROCEDURE
A form has been developed by the University Physician to report incidents of exposure,
e.g. needle sticks, mucous membrane exposure, tuberculosis exposure, etc., and may
be found on the Clerkship Medical Education page of the MSUCOM website here

Contact Assistant Dean for Clerkship Education, Dr. Susan Enright, if exposure incident
occurs: enright4@msu.edu.

STUDENT VISA
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 Once a
student’s eligibility for (clinical and/or testing) accommodation has been determined,
the student may be issued a Verified Individualized Services and
Accommodations (VISA) form. Students must present this VISA form to the
Clerkship Team (COM.Clerkship@msu.edu), A-332 East Fee Hall, at the start of the
semester in which they intend to use their accommodations (for tests, projects, labs,
etc.). Accommodation requests received after this date will be honored whenever
possible.

If updates or modifications to an existing VISA form are made after the semester begins,
it is the responsibility of the student to submit an updated version to the Clerkship Team
if he or she intends to use the new accommodation going forward.
## SUMMARY OF GRADING REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Submission Method</th>
<th>Honors Designation</th>
<th>Pass</th>
<th>Extended Grade</th>
<th>No Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion of required number of research hours and satisfactory evaluation by Research mentor</td>
<td>Email (<a href="mailto:com.research@msu.edu">com.research@msu.edu</a>)</td>
<td>N/A</td>
<td>If course requirements are met</td>
<td>N/A</td>
<td>If course requirements are not met</td>
</tr>
</tbody>
</table>