

RAD 610
Advanced Radiology

CLERKSHIP ELECTIVE ROTATION

DEPARTMENT OF RADIOLOGY
KEVIN C. ROBINSON, D.O.]
INTERMIN CHAIRPERSON and INSTRUCTOR OF RECORD
Robin280@msu.edu

EFFECTIVE AUGUST 2, 2021 TO JULY 31, 2022

For questions about content or administrative aspects of this course, please contact:

Beth Clarke
COURSE ASSISTANT (CA)
clarkem@msu.edu

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.

TABLE OF CONTENTS

INTRODUCTION AND OVERVIEW.....	1
ELECTIVE COURSE SCHEDULING	1
Preapproval.....	1
Required Prerequisites	1
Course Confirmation and Enrollment.....	1
ROTATION FORMAT	1
GOALS AND OBJECTIVES	2
GOALS.....	2
OBJECTIVES	2
COLLEGE PROGRAM OBJECTIVES.....	3
REFERENCES.....	3
ROTATION REQUIREMENTS.....	3
ACADEMIC	4
CLINICAL	4
ROTATION EVALUATIONS	4
Attending Evaluation of Student.....	4
Student Evaluation of Clerkship Rotation	5
Unsatisfactory Clinical Performance	5
CORRECTIVE ACTION PROCESS.....	5
BASE HOSPITAL REQUIREMENTS	5
STUDENT RESPONSIBILITIES AND EXPECTATIONS.....	5
CLINICAL RESPONSIBILITIES	5
ACADEMIC RESPONSIBILITIES	6
RADIOLOGY COMPETENCY/LEARNING MODULES.....	6
MSU COLLEGE OF OSTEOPATHIC MEDICINE STANDARD POLICIES	10
ATTENDANCE POLICY	10
POLICY FOR MEDICAL STUDENT SUPERVISION	13
Supervisors of the Medical Students in the Clinical Setting.....	13
Level of Supervision/Responsibilities.....	13
STATEMENT OF PROFESSIONALISM	14
STUDENT RIGHTS AND RESPONSIBILITIES.....	14
MSU Email	14
FACULTY RESPONSIBILITIES.....	15
COURSE GRADES	15
N Grade Policy	15

RAD 610

STUDENT EXPOSURE PROCEDURE.....	15
STUDENT VISA.....	15
SUMMARY OF GRADING REQUIREMENTS	17

INTRODUCTION AND OVERVIEW

Welcome to the radiology clerkship. During this two-week clerkship, it is anticipated you will have the opportunity to build on your current knowledge of diagnostic imaging to better equip you both for the remainder of your clinical experiences, as well as in your postgraduate training.

This curriculum is extremely flexible consisting of 17 on-line education modules. The MSU Desire 2 Learn (D2L) RAD 610 site offers additional resources to assist you in obtaining the maximum value from your radiology clerkship. The on-line modules are available from the D2L site and from direct links on the Michigan State University Radiology web site at: http://education.rad.msu.edu/Courses/RAD_Clerkship/index.html

Please familiarize yourself with the content of the syllabus, as it will be your guide to managing this course.

ELECTIVE COURSE SCHEDULING

Preapproval

- This course does not require preapproval from the IOR. The student should follow the below directions for elective course confirmation and enrollment.

Required Prerequisites

- This course requires the following prerequisite course(s):
 - RAD 609

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 course is designed to provide the student with an opportunity to actively engage in patient-based, learning experiences under the guidance of a faculty member (preceptor) in collaboration, as appropriate, with residents and/or fellows.

Rotations are typically two weeks, 3 credit hours or four weeks, 6 credit hours in duration. Timeframes for each rotation are decided at least 30 days prior to the beginning of the rotation.

The overall performance of course participants will be evaluated through customary assessment instruments normally employed by the department for core rotations, at the discretion of the instructor of record.

GOALS AND OBJECTIVES

GOALS

Our overall goal of this rotation is to provide our students with a basic level of understanding of the principles and applications of diagnostic imaging. We offer direct exposure to the individuals obtaining (i.e. technologists) and interpreting (i.e. Radiologists) the diagnostic examinations.

OBJECTIVES

- Reinforce the student's understanding of x-ray, ultrasound, CT, MRI, Nuclear Medicine and PET imaging obtained during the first 2 years of the MSU-COM curriculum.
- Gain additional insight into how diagnostic imaging fits into the multidisciplinary approach to patient care and understand the importance of communication, professionalism, and teamwork between clinicians and radiologists relating to patient management while developing a better understanding of the synergies possible between clinicians and radiologists in the consultative care of patients.
- Encourage correlation of diagnostic images with previously learned normal and pathologic anatomy and pathophysiology to increase the student's understanding and recognition of common processes and pathology available from diagnostic images.
- Understand the basic requirements and restrictions necessary to obtain quality imaging by the various modalities and the impact on that quality by variation in patient condition, size, and mental status while introducing the students to the indications, contra-indications, patient preparation, post-procedure care, and relative radiation exposure and risks for various diagnostic imaging exams.
- Increase the student's knowledge of the various diagnostic imaging modalities offered by a modern radiology department and achieve a better understanding of how to select and sequence the appropriate imaging examinations for specific clinical presentations while considering the relative costs of different diagnostic imaging exams to be better able to plan and sequence patient exams that optimizes outcome and cost-effective patient care.
- Offer the student the opportunity to observe diagnostic imaging exams, instill sensitivity towards the patient's needs and apprehension about particular procedures and discuss the results and interpretation with the radiologist.

- Increase the students understanding of image digitization, how variables in digitization influence resolution and the computer's impact on diagnostic imaging (PACS).

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

Selected texts can be of value during the clerkship and to assist in the understanding of the materials included in the on-line learning modules. Suggested readings will be provided via D2L but are not essential for the successful completion of the clerkship.

1. Felson's Principles of Chest Roentgenology, A Programmed Text, Third Ed. by Lawrence R. Goodman
2. Essential Radiology, Second Edition by Richard B. Gunderman
3. Clinical Radiology, The Essentials, Third Edition by Richard H. Daffner
4. Chest, Abdomen, Bone and Clinical Skills, A Problem-Based Text, Third Edition by Amorosa, Novelline, and Squire
5. Squires: Fundamentals of Radiology (Sixth Edition), Harvard University Press, 2004
Novelline, R.

Textbooks, current radiology periodicals, and digital teaching series may be available in the onsite Radiology library and may vary somewhat by site.

Full service, extended hour, libraries are present at Michigan State University with onsite medical librarians, web-based searchable medical databases, and standard medical journals in both print and electronic formats. In addition, all MSU students have 24-hour access to the extensive online Michigan State University electronic library, including databases and electronic journals.

ROTATION REQUIREMENTS

REQUIREMENT	SUBMISSION METHOD	DUE DATE (Please refer to D2L for actual due dates)
Quizzes	D2L	Last Day of Rotation
PowerPoint presentation	D2L	Last Day of

		Rotation
Attending Evaluation of Clerkship Student	Can be accessed via the “Attending Evaluation” link in Kobiljak online schedule. Email completed evaluation to COM.Clerkship@msu.edu	Last Day of Rotation
Student Evaluation of Clerkship Rotation	Can be accessed and submitted via the “Student Evaluation” link in Kobiljak online schedule.	Last Day of Rotation

ACADEMIC

1. Quizzes: Completion of quiz assignment on D2L associated with each module. Satisfactory completion of the 17 quizzes with an overall 80% score is necessary for the completion of the course.
2. PowerPoint presentation: Preparation of a PowerPoint on topic of choice in radiology with presentation to local faculty and copy to MSU radiology via course dropbox in D2L. This is due before the end of the 2nd week of this rotation.

CLINICAL

1. Attending Evaluation of Rotation: A satisfactory evaluation of the student by an attending physician. The determination of a satisfactory attending evaluation is governed by the College’s Policy for Retention, Promotion, and Graduation. This evaluation is due after the rotation is complete and must be submitted to the hospital’s Medical Education office.
2. Student Evaluation of Rotation: To submit this evaluation, access the ‘evaluate’ link in the Kobiljak schedule. This evaluation is due at the end of the rotation.

No Honors given for this course.

ROTATION EVALUATIONS

Attending Evaluation of Student

Students are responsible for assuring that his/her clinical supervisor receives the appropriate evaluation form. Forms can be accessed via the “Attending Evaluation” link in the student’s Kobiljak online Clerkship schedule.

Students should actively seek feedback on his/her performance throughout the course of the clinical rotation. Students should also sit down and discuss the formal evaluation with the clinical supervisor.

Students should keep a copy of the evaluation and leave the original with the Medical Education Office at the clinical training site where that office will review, sign, and forward the completed form to the COM Clerkship Team. Any evidence of tampering or modification while in the possession of the student will be considered “unprofessional behavior” and will be referred to the MSUCOM Spartan Committee Clearinghouse for resolution, per MSUCOM’s Common Ground Framework for Professional Conduct or to the Committee on Student Evaluation (COSE).

Grades are held until all rotation requirements, including evaluation forms, are received. Be sure you are using the correct form.

Student Evaluation of Clerkship Rotation

Students will submit their rotation evaluations electronically at the conclusion of every rotation by accessing their online evaluation system at:

http://hit-filemakerwb.hc.msu.edu/Clerkship/login_student.html

Unsatisfactory Clinical Performance

The Instructor of Record and/or the Assistant Dean for Clerkship Education will review/investigate a student’s performance on a rotation when a concern is raised by the supervisor(s), and 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.

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 PROCESS

There is no Corrective Action offered on this course. As determined by the Instructor of Record, the student will receive an N grade for the course if all assignments are **not completed** successfully by (the Tuesday) 2 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.

BASE HOSPITAL REQUIREMENTS

Students are responsible for completing all additional requirements set by the hospital/clinical site in which the student is completing the rotation. Students are not responsible for reporting results of requirements outside the ones listed above to the college.

STUDENT RESPONSIBILITIES AND EXPECTATIONS

CLINICAL RESPONSIBILITIES

- Students are expected to function collaboratively on health care teams that include health professionals from other disciplines in the provision of quality, patient-centered care.

ACADEMIC RESPONSIBILITIES

- Students are expected to identify, access, interpret and apply medical evidence contained in the scientific literature related to patient's health problems.
- Students are expected to: assess their personal learning needs specific to this clinical rotation, engage in deliberate, independent learning activities to address their gaps in knowledge, skills or attitudes; and solicit feedback and use it on a daily basis to continuously improve their clinical practice.

RADIOLOGY COMPETENCY/LEARNING MODULES

Unit 1 / Module 1: Introduction/Chest Radiography

1. Review X-Ray production
2. Learn image capture mechanisms
3. Identify radiographic attenuation principles
4. Review normal chest X-Ray/technical considerations
5. Compare normal variations/congenital variation in imaging chest anatomy
6. Identify technical artifacts

Unit 1 / Module 2: Chest Radiography - Continued/Inflammatory processes and Lobar disease

1. Review chest radiography positioning
2. Review chest imaging presentation of inflammatory processes
3. Understand differences in presentation of alveolar and interstitial disease
4. Understand pleural inflammatory disease

Unit 1 / Module 3: Chest CT/PET imaging Lung neoplasm

1. Review Computed Tomography operational principles
2. Understand PET imaging operational principles
3. Review X-Ray, CT and PET presentation of lung/mediastinum neoplasm

Unit 1 / Module 4: Chest Radiography/Cardiac Evaluation Pulmonary Embolism

1. Review cardiac evaluation with diagnostic imaging techniques – application and interpretation
2. Review congestive heart failure evaluation with diagnostic imaging
3. Identify cardiac ultrasound techniques and appearances
4. Review coronary angiography techniques
5. Understand CT evaluation of the heart techniques and appearances
6. Review MRI evaluation of the heart techniques and appearances
7. Understand Radionuclide cardiac imaging – perfusion, blood pool and metabolism techniques and appearances
8. Understand principles, techniques, and current status of pulmonary embolism

detection

Unit 2 / Module 1: Imaging Evaluation of the Abdomen

1. Review abdomen evaluation imaging technologies – their application and interpretation
2. Understand renal calculi disease evaluation
3. Recognize intestinal obstruction/ileus evaluation utilizing x-ray
4. Understand pneumoperitoneum evaluation

Unit 2 / Module 2: Gastrointestinal Imaging

1. Understand the utilization of positive and negative contrast agents in the GI tract including both GI studies and CT
2. Identify the different varieties of GI tract diverticula
3. Understand and identify hiatal hernia
4. Understand the variable causes of GI tract obstruction, i.e. foreign bodies, ulcer disease, neoplasm, volvulus & hernia
5. Identify inflammatory disease of the GI tract, infection, ulcer disease, regional enteritis, ulcerative colitis, appendicitis & diverticulitis
6. Recognize neoplastic disease of the GI tract

Unit 2 / Module 3: Hepatobiliary disease, Pancreatic Disease

1. Review and understand the imaging modalities used in hepatobiliary and pancreatic evaluation including x-ray, radioisotope, ultrasound, CT and MRI
2. Understand the imaging presentation of gallbladder pathology including cholecystitis and cholelithiasis
3. Understand the imaging presentation of focal and diffuse liver diseases including cirrhosis, hepatitis, vascular abnormalities, and neoplasm
4. Review and understand the appearance of pancreatic disease including pancreatitis and neoplasm

Unit 2 / Module 4: Evaluation of the urinary tract

1. Review and understand the imaging modalities utilized in evaluation of the urinary tract including x-ray, ultrasound, nuclear medicine, CT, MRI and PET
2. Review the imaging anatomy of the urinary tract
3. Understand the nature and imaging appearance of various renal calculi
4. Understand the relative benefits and risks of iodinated contrast agents utilized in diagnostic x-ray base imaging
5. Understand the imaging appearances of various developmental anomalies of the urinary tract
6. Understand the imaging presentation of neoplasms affecting the urinary tract
7. Understand the imaging approach to conditions affecting the prostate gland and the scrotum/scrotal contents

Unit 3 / Module 1: Musculoskeletal imaging introduction

1. Review and understand the imaging modalities utilized in the evaluation of

- musculoskeletal structures including x-ray, ultrasound, nuclear medicine, CT, MRI and PET
2. Review the normal anatomy of bone and the normal ossification structures
 3. Review and understand the imaging evaluation and findings associated with skeletal trauma and fracture
 4. Understand the descriptive terms utilized in the description of fractures and dislocations
 5. Demonstrate an understanding of the principles related to the development of stress injury to musculoskeletal structures
 6. Understand the varied appearance of musculoskeletal soft tissue injuries utilizing US and MRI

Unit 3 / Module 2: Bone tumors and tumor like conditions of bone

1. Review and understand the imaging techniques utilized in the evaluation of bone tumors and tumor like conditions of bone including x-ray, CT, MRI and Nuclear Medicine
2. Review the descriptive terms utilized in the evaluation of bone lesions
3. Understand the steps in the evaluation of bone lesions including the modalities and the appropriate sequence of evaluation
4. Review and understand the imaging appearance of benign and malignant neoplastic processes involving bone
5. Review the imaging appearances of infection involving the skeletal system
6. Develop an awareness of other bone abnormalities that may mimic more serious conditions and their imaging appearance

Unit 3 / Module 3: Imaging presentations of arthritis & imaging evaluation of the aging skeletal system

1. Review and understand the imaging evaluation of the various sero-negative and sero-positive arthritides
2. Understand the imaging approach to evaluation of declining bone mass in the aging adult

Unit 3 / Module 4: Pediatric Fractures & other unusual bone diseases

1. Identify and describe Salter-Harris fractures
2. Identify and describe findings and mechanisms of injury of fractures peculiar to the pediatric population
3. Understand the mechanisms and appearances of delayed and non-union fractures
4. Demonstrate an understanding of the appearance of, significance of, and cause of tendon insertion avulsion injuries
5. Demonstrate an awareness of various skeletal manifestations of various defects of osteochondral structures and their appearance by diagnostic imaging
6. Demonstrate an awareness of skeletal manifestations of vascular compromise abnormalities and their appearance by diagnostic imaging

Unit 4 / Module 1: Spine evaluation

1. Understand the techniques of evaluating the appearance of the spine utilizing imaging techniques including x-ray, CT and MRI
2. Recognize and understand developmental anomalies of the spine that may be demonstrated with diagnostic imaging techniques
3. Recognize and understand the appearance of spine injury including both fractures and dislocations with the knowledge of the appropriate modality to choose
4. Recognize and understand the appearances related to vertebral disk disease using imaging technologies including x-ray, CT and MRI
5. Understand the basic principles of myelography and its value in evaluating the thecal sac, cord and roots

Unit 4 / Module 2: Neuroradiology

1. Review and understand the imaging modalities utilized in the evaluation of the neural axis
2. Review the findings related to head trauma using imaging technologies
3. Understand the imaging of pituitary disease
4. Understand the imaging of, and diseases affecting the orbits
5. Understand the imaging appearances of primary and metastatic benign and malignant brain neoplasms
6. Understand the appropriate imaging work-up of headache and the imaging appearances of various underlying etiologies for headache
7. Understand the application of imaging modalities in the diagnosis of intracranial vascular abnormalities

Unit 4 / Module 3: Imaging evaluation of facial and neck abnormalities

1. Review imaging of pediatric airway disease, techniques and findings
2. Review evaluation of swallowing difficulties originating in the neck by imaging techniques
3. Review imaging of congenital cystic structures arising in the neck
4. Understand imaging of facial and neck trauma
5. Review imaging of infectious processes affecting the facial structures and neck

Unit 4 / Module 4: Pelvic ultrasound

1. Review and understand the principles of diagnostic ultrasound and its application to pelvic structure
2. Review and understand the application of ultrasound in the evaluation of ovarian disease including cysts, torsion and neoplasm
3. Review and understand the application of ultrasound in evaluation of diseases of the uterus including infection and neoplasm
4. Review and understand the applications of ultrasound to the evaluation of pregnancy and its complications including ectopic pregnancy and placental abnormalities

Unit 4 / Module 5: Pediatric Imaging

1. Review and understand the differences inherent in the imaging of the pediatric

- patient compared to the adult patient
2. Understand the three main types of respiratory distress that may be encountered during the newborn period
 3. Review and understand the various developmental anomalies that can be evaluated with diagnostic imaging
 4. Review and understand the application of the various imaging modalities in the pediatric population

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).

Length of rotation	Maximum number of days off
4 weeks	2 days

2 weeks	0 days	Should an absence exceed these limits, the student is responsible for requesting additional days from the Assistant Dean for Clerkship Education via email (com.clerkship@msu.edu) prior to the absence.
---------	--------	---

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.

Absence Type	Qualifications	Maximum number of days off	Details	Required Approval from Assistant Dean for Clerkship Education
Personal Day	Illness Medical/Dental appointments Wedding, family graduations (additional reasons must be discussed with the Asst Dean for Clerkship Education prior to request)	5 total days per year (individual events must comply with the max of 2 days off any 4-week rotation)	Vacations must be planned during allotted vacation time in schedule. Vacations are not acceptable personal day absences.	No
Jury Duty	Court documentation must accompany the <i>Clerkship Program Absence Request Form</i> .	N/A	Jury duty, when obligated, is not considered a personal day absence	Yes
Hospital-organized community events	Example: Special Olympic Physicals	N/A	These events would be considered part of the rotation and not a personal day absence.	No
Examination	COMLEX USA Level 2 CE/USMLE Step 2 CK/Canadian MCCEE	1 day		No
	COMAT/NBME shelf examinations	Time required to complete exam	Students should be reporting to rotation before/after examination	No
Conference/Research Presentation	Research presentation on core rotation	Travel and presentation time only	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.	Yes
	Conference or research presentation while on an elective rotation	3 days on a 4-week elective rotation	Student must submit <i>Clerkship Program Excused Absence Request Form</i> 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.	Yes
Prolonged Illness, Bereavement, Maternity Leave	Medical related absence or bereavement	TBD	Students-contact the Assistant Dean for Clerkship Education to discuss time off rotations	Yes

POLICY FOR MEDICAL STUDENT SUPERVISION

Supervisors of the Medical Students in the Clinical Setting

The MSUCOM curriculum includes required clinical experiences in a variety of clinical learning environments. The role of the student is to participate in patient care in ways that are appropriate for the student's level of training and experience and to the clinical situation. The student's clinical activities will be under the supervision of licensed physicians. This supervising physician may delegate the supervision of the medical student to a resident, fellow, or other qualified healthcare provider; however, the supervising physician retains full responsibility for the supervision of the medical students assigned to the clinical rotation and must ensure his/her designee(s) are prepared for their roles for supervision of medical students.

The physician supervisor and his/her designee(s) must be members in good standing in their facilities and must have a license appropriate to his/her specialty of practice and be supervising the medical student within that scope of practice as delineated by the credentialing body of the facility.

Level of Supervision/Responsibilities

Clinical supervision is designed to foster progressive responsibility as a student progresses through the curriculum, with the supervising physicians providing the medical student the opportunity to demonstrate progressive involvement in patient care. MSUCOM students will be expected to follow clinical policies of the facility regarding medical records and clinical care. Medical student participation in patient history/physical exam, critical data analysis, management, and procedures will include factors, but not limited to:

- The student's demonstrated ability
- The student's level of education and experience
- The learning objectives of the clinical experience

First and second year medical students will be directly supervised at all times (supervising physician or designee present or immediately available.)

Third- and fourth-year medical students will be supervised at a level appropriate to the clinical situation and student's level of experience. For some tasks, indirect supervision may be appropriate for some students. Direct supervision would be appropriate for advanced procedures.

Supervising physicians will provide medical students with timely and specific feedback on performance. The supervising physician will complete a mid-rotation evaluative discussion with the medical student. Supervising physicians will complete a summative evaluation and are encouraged to contact the course/clerkship director with any gaps in student performance.

Medical students with any concern regarding clinical, administrative, and educational

or safety issues during his/her rotation will be encouraged to contact the supervising physician or clerkship/course director.

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.

It is the responsibility of the clinical faculty to provide students with ongoing feedback during rotation upon request. Clinical faculty are generally recommended (though not required) to limit student assigned duty hours from 40 to 60 hours weekly (and not exceeding 60 hours). Both faculty and students are to be treated fairly and professionally to maintain a proper working relationship between trainer and trainee.

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.

ET/Extended Grade – means that a final grade ('Pass' or 'No Grade') cannot be determined due to one or more missing course requirements. The ET 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 'ET' 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 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](https://com.msu.edu/current-students/clerkship-medical-education) (<https://com.msu.edu/current-students/clerkship-medical-education>).

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

Requirement	Submission Method	Honors Designation	Pass	Extended Grade	No Pass
Quizzes	D2L	N/A	X	X	X
PowerPoint Presentation	D2L	N/A	X	X	X
Attending Evaluation	eValue	N/A	X	X	X
Student Evaluation	eValue	N/A	X	X	X