

IM 651
Cardiology Clerkship
Elective Clerkship Rotation Syllabus

Osteopathic Medical Specialties

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At MSUCOM, we are constantly working to improve our curriculum and to meet new AOA accreditation guidelines. While major changes will generally be instituted at the beginning of the school year, most minor changes may be implemented semester to semester.

Please be mindful of the need to read your syllabus BEFORE beginning your rotations.
This syllabus is active for any rotation August 1, 2019 to July 30, 2020

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Pre-Approval and Pre-Requisites

- An application is required for every elective rotation.
- 30-day advance application approval required (applies to a rotation add, change or cancellation)

General Description

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

Rotation schedules **are not** to be submitted until the last Friday-Sunday of the rotation. You must document your actual schedule worked. You are required to document any time off for illness, boards, etc. that caused a deviation from the schedule you were provided. **All rotation days must be accounted for.**

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.

Educational / Instructional Goals & Objectives

Course participants will:

- A. Develop an appreciation of the practice of cardiology as related to the specialty of the preceptor.
- B. Assimilate what they learn and demonstrate their understanding of patient-care through ongoing interaction and dialogue with, as well as formative feedback from, the preceptor.
- C. Demonstrate an understanding of the (seven) osteopathic core competencies (as applicable).

Educational Goals

The cardiology rotation is intended to provide the student with hands on experience in the evaluation and treatment of various conditions related to cardiology.

1. The clinical experience will emphasize the diagnosis and management of acute and chronic cardiac diseases.
2. The clinical experience will emphasize evaluation of risk factors, and management of risk factors to prevent disease advancement if possible.
3. The clinical experience will include learning to perform a complete and accurate patient history and physical exam.
4. The clinical experience will include identification and indications for appropriate diagnostic studies.
5. The clinical experience will help the student identify the first line therapy for common cardiac disorders.

Competencies/Objectives

Medical Knowledge: The student is expected to be able to describe the clinical presentation, pathophysiology and management of the following cardiac issues:

CORONARY ARTERY DISEASE

- 1) Risk Factors
- 2) Preventative Strategies
- 3) Medication management

HEART FAILURE

- 1) Systolic
- 2) Diastolic
- 3) Chronic vs. Acute
- 4) Cardio-pulmonary Syndrome
- 5) Cardio-renal Syndromes
- 6) Medication management
- 7) Causes: Ischemic, Valvular, HTN, other.

ARRHYTHMIAS

- 1) Brady/Tachy
- 2) Heart Blocks
- 3) Ventricular Rhythms
- 4) Atrial Rhythms
- 5) Medication management

ENDOCARDITIS

- 1) Acute vs. Chronic
- 2) Diagnosis Modalities
- 3) Treatment protocols
- 4) Surgical options
- 5) New prevention guidelines

HYPERLIPIDEMIA

- 1) ATP III management standards

ATRIAL FIBRILLATION

- 1) CHAD2 VASc Score
- 2) Anticoagulation/Medication Management

CARDIOGENIC SYNCOPE

- 1) Work-up for syncope

ACUTE CORONARY SYNDROME

- 1) STEMI
- 2) NSTEMI
- 3) Unstable Angina
- 4) TIMI scoring
- 5) Thrombolytics vs Primary Cardiac Intervention

Clinical Skills

- A. The student should complete a thorough medical history including details of current symptoms, previous cardiology issues and management efforts, and risk factors that could impact on the diagnosis or management of their current problem.
- B. Perform a complete physical exam with appropriate emphasis on the cardiovascular exam. This should include an in-depth knowledge of systolic and diastolic heart murmurs.
- C. Interpret common diagnostic tests including EKGs and chest x-rays. Exposure to cardiac catheterizations, stress tests, and echocardiograms.
- D. Interpret laboratory test including electrolytes, blood counts, and cardiac enzymes.

Socioeconomic: the student will:

- 1) Appreciate the psychosocial issues that potentially impact the patient's cardiac problems (professionalism and sensitivity to disability issues).
- 2) Appreciate the importance of functional assessment and physical rehabilitation as well as the role of physical and occupational therapists, nutritionists, and rehabilitation/skill nursing care facility in elderly patients (professionalism and sensitivity to disability issues).

Assessment of Clinical Competencies:

- 1) Patient Care: The student will be able to complete an accurate history and physical exam and accurately document the findings, write daily notes to accurately and concisely project the status of the patient's condition, and recognize unstable patients in need of urgent evaluation and management.
- 2) Medical Knowledge: The student can demonstrate knowledge of the criteria for diagnosis of common clinical problems, know the first line therapies for common clinical problems, and demonstrate a knowledge of the interpretation of diagnostic tests.
- 3) Communication Skills: The student can effectively present the clinical evaluation of a new patient and /or the clinical progress of a continuing patient, and communicate effectively with patients, clinical support staff, and supervising residents and attending physicians.
- 4) Professionalism: The student will demonstrate respect for patients, families, co-workers, and work effectively with nurse coordinators, social services, and ancillary staff.
- 5) Practice Based Learning: The student will be able to identify and discuss appropriate, evidence based approaches to assist in the diagnosis and management of clinical problems encountered in their patients.
- 6) Systems Based Practice: The student will be able to incorporate a team approach in the management of complicated patients.
- 7) Osteopathic Principles and Practices: The student should be able to integrate osteopathic principles and treatments in the management of the hematologic patient.

Teaching Methods: The student is expected to function as a viable member of the supervising physician health care team. Assigned student responsibilities can include: supervised first patient contact in the office or clinic, the completion of admission history and physicals, the completion of pre-rounding progress notes on assigned patients, participation in conducting and the interpretation of diagnostic testing and clinical management.

Participation in Clinical Conferences and/or Structured Educational Programs: The student is expected to participate in clinical conferences and educational programs appropriate for the clerkship course including those generally associated with residency educational programs.

Evaluation: The student is encouraged to solicit feedback related to his/her clinical performance on a daily basis. The student should receive formative performance evaluations at the mid-point and end of the rotation that outlines faculty perceived strengths and weaknesses related to the student's performance that includes recommendations for strengthening his/her performance as warranted.

Reference Materials

Review of the EKG modules in OST 579 and the cardiology course pack will be of value to the student. There is no assigned textbook. Reading assignments are under the purview of the preceptor. In addition, the following sites may be of help for student review.

<http://www.mdcalc.com/> : Formulas

<http://www.nhlbi.nih.gov/files/docs/guidelines/at glance.pdf> : ATP III Guidelines

<http://www.ecglibrary.com/ecghome.html> : EGG Library

Student Responsibilities

Course participants will meet the preceptor on the first day of the rotation at a predetermined location to be oriented to rotation hours, location(s), and expected duties and responsibilities while on-service.

- *The student **will** meet the following **clinical responsibilities** during this rotation:*
 - 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.
- *The student **will** meet the following **academic responsibilities** during this rotation:*
 - Students are expected to identify, access, interpret and apply medical evidence contained in the scientific literature related to patients 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.

Rotation Clinical Requirements

Requirements	Submission Method	Due Date
Attending Evaluation of your Performance on Rotation	Submit completed form to your hospitals per the instruction on the evaluation form.	Final Day of Rotation
Student Evaluation of the Rotation	Submit electronically by 11:59pm the last Sunday of the rotation online through your clerkship schedule.	By 11:59 pm last Sunday of course. Must submit to receive a passing grade, student will have an "ET" grade until the evaluation is completed.
Patient Types and Procedure Log	See page at the end of syllabus and upload into D2L Drop Box for the course	11:59 pm Last Sunday of Rotation
Clinical Shift Schedule	Online D2L Drop Box if you have access to a scanner -or- Mail to: MSUCOM, Dept of OMS ATTN: Steve Stone 909 Wilson Road, B315A West Fee Hall East Lansing, MI 48824	Not to be submitted until the last Friday- Sunday of the rotation, and must be the schedule you worked, not what you were scheduled to work

The student who fails to turn in required paperwork, who has a verifiable reason why they failed to do so, will be allowed a 2-week grace period or more depending on the circumstances, Failure to meet this two week deadline will result in an N grade.

Unsatisfactory Clinical Performance

A student's clinical performance will be assessed through the Attending Clinical Clerkship Rotation Evaluation. Unsatisfactory Attending Evaluations are governed by the Policy for Retention, Promotion and Graduation (4.e).

- A designation given to any student who:
- Receives on (1) and/or two (2) N grades in any Clerkship course; and/or
- Receives two (2) or more overall "Below Expectations" ratings on any Clerkship rotation evaluation: and/or
- Displays indicators of marginal performance on any clerkship rotation.
- The student will be required to appear before the COSE Clerkship Performance Subcommittee.
- Any student failing to appear, when directed, without due cause, or fails to meet any Subcommittee requirement, will be suspended from the College.

Clerkship Attendance Policy

Policy:

In order to gain the knowledge and skills to successfully complete the MSUCOM clerkship program, consistent participation/attendance in program activities is essential. Any time off must not interfere with the quality of the rotation.

1. In the event a student needs to be absent from any rotation for the reasons listed below and permissible by the rotation syllabus, students may request time off.
2. Any absence (unless emergent) must be approved in advance (at least 30 days) of absence by the medical education department (student coordinator/director or DME), utilizing the Clerkship Program Excused Absence Request Form. Students must notify rotation team and medical education of emergent/illness absences on day of absence.
3. A student may not be absent more than 2 days on any one 4 week rotation (no time off allowed for rotations of 2 weeks or less) for the reasons below (exception Interview absences or Conference absences as below).
4. Any additional time off any one rotation must be approved by the MSUCOM Instructor of Record for the course the absence will occur.

Absence due to interviews:

For the purpose of interviewing only, a student may be absent 4 days on a 4 week rotation (2 days on a 2 week rotation) during the months of September to January in the OMS year 4. Interview invitations must accompany the Clerkship Program Excused Absence Request Form.

Absence due to examinations:

Examination	Maximum Time Off (includes travel time)
COMLEX USA Level 2 CE/USMLE Step 2 CK/Canadian MCCEE	1 day
MSUCOM COMLEX PE Simulation at MSU	1 day for each scheduled simulation
COMLEX USA Level 2 PE/USMLE Step 2 CS(Canadian Students Only)	2 days
COMAT/SHELF examinations	Travel time and time for exam

Personal Day Absence:

Students are allowed 5 personal days per academic year in OMS 3 and OMS 4. These days are not carried over from third year to fourth year. These are to be used for illness, physician appointments, and special events (weddings, graduations, special anniversary events) and must not exceed 2 days on any 4 week rotation (#3 above). Prolonged illness and bereavement will be handled on a case by case basis between MSUCOM Director of Clerkship and the base hospital/medical education department. Students must notify rotation team and medical education of emergent/illness absences on day of absence.

Hospital organized community events that might lead to periodic absence from rotations – student participation is encouraged and if base hospital approved, would be considered part of the rotation and not a personal day absence.

Jury duty – when obligated, student participation is not considered a personal day. Court excuses must accompany any absence. If absence is prolonged, this will be handled on a case-by-case basis between the base hospital/medical education and MSUCOM.

Conference Absence:

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.

- a. Appropriate paperwork with proof of presentation and copy of conference agenda must accompany the form.
- b. Time off in this situation will be for travel and presentation only.

While on elective rotations: A student may submit a request for an excused absence to attend one (1) professional meeting, time not to exceed 3 days off rotation. The meeting agenda must accompany the Clerkship Program Excused Absence Request Form.

Personal vacations/family reunions, etc are not part of this policy. Vacations can be scheduled periodically, provided all curriculum requirements will be met, with the assistance of your Student Support Advocate. Vacations will not be permitted on any core rotation or elective rotation.

Abuse of this policy, as determined by the GME office or a clinical preceptor, may be documented in a student evaluation(s) and/or reported to the Associate Dean of Student Services at MSUCOM via the Student Incident Report Form: <http://com.msu.edu/Students/Registrar/Policies.htm> or via phone call to the Associate Dean of Student Services (517-353-8799).

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 students demonstrated ability
- The students 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, 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 are 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.

Students 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.

Use of Electronic Devices

Students are expected to be fully engaged in the clinical education experience. Using electronic devices while on clerkships or during other required activities can be distracting and disrespectful to patients, preceptors, lecturers, and fellow students. Electronic devices are not to be used during rounds, meetings, small groups or lectures, or when in the room with patients: the only exception would be if instructed to do so by an attending or resident faculty member. Students wishing to retrieve information that may be relevant to the patient or small group discussion should get permission to do so from the faculty member. It is never appropriate for students to use electronic devices for reading e-mail, texting, surfing the web or other personal activities while on any clerkship required activity. Students may receive unprofessional behavior notation(s) for failure to use electronic devices appropriately.

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 in order 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 according to didactic and clinical performance by the department.
- **N-No Grade** – means that no credit is granted and that the student did not achieve a level of performance judged to be satisfactory according to didactic and clinical performance by the department.
- **ET-Extended Grade** – means that a final grade (“Pass” or “No Grade”) cannot be determined due to one or more missing course requirements. Once all course requirements have been completed, received, and processed, the ET grade will be changed to a final grade. An “ET” will NOT remain on a student’s transcript.

N-GRADE POLICY

Remediation is not offered for Clerkship courses. Any student who receives an N grade in the Clerkship Program will be required to appear before the COSE Clerkship Performance Subcommittee (COSE).

Rotation Evaluations

Attending/Faculty/ Resident 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 assertively 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. It is never a good idea to sign the form and then give it to the preceptor, but rather sit with the preceptor while they fill it out.

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 Office of the Registrar. It is important to know that evaluations will not be accepted by the COM Office of the Registrar if submitted by the student. Any evidence of tampering or modification while in the possession of the student will be considered “unprofessional behavior” resulting in an “N” grade and review by the Committee on Student Evaluation (COSE) and/or the College Hearing Committee.

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

Student Evaluation of the Rotation

Students will submit their rotation evaluations electronically at the conclusion of every rotation through the clerkship schedule.

Exposure Incidents Protocol

You must also notify your attending and the DME Office of your base institution of the incident. A form has been developed by the University to report exposure incidents. These forms should be on file in your DME's office. While on rotations that occur outside of the base hospital system notify your attending immediately of any exposure, and follow the MSU procedure for evaluation and treatment. The form can be accessed at www.com.msu.edu/AP/clerkship_program/clerkship_documents/exposure.pdf. Please make yourself familiar with the procedure and the form.

Student Name _____ Student ID# _____

Patient Types and Procedure Log

Procedure	#Required	Date	Supervisor Initials
Observe 2 Echocardiograms	1. 2.		
Observe 2 cardiac caths unless not in a cath center hospital	1. 2.		
Interpret 10 EKGs	1. 2. 3. 4. 5. 6. 7. 8. 9. 10.		
Evaluate 5 Geriatric Pt. (age >65) with cardiac complaints	1. 2. 3. 4. 5.		
Participate in the evaluation of 10 patients with CHF – stable or unstable	1. 2. 3. 4. 5. 6. 7. 8. 9. 10.		
Interpret 10 Chest x-rays	1. 2. 3. 4. 5. 6. 7. 8. 9. 10.		
Observe 5 stress tests (doesn't matter the type)	1. 2. 3. 4. 5.		