

IM 655  
**NEPHROLOGY CLERKSHIP**

**CLERKSHIP ELECTIVE ROTATION SYLLABUS**

OSTEOPATHIC MEDICAL SPECIALTIES

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RECORD

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*At Michigan State University College of Osteopathic Medicine (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**

This syllabus provides an overview of rotation goals and objectives designed to help you gain an understanding of the breadth and scope of this subject. As you progress through the rotation, you will perform certain activities intended to help you meet the identified goals and objectives. Please make sure to review this syllabus in its entirety to ensure understanding of the rotation format, syllabus content, and Michigan State University College of Osteopathic Medicine (MSUCOM) expectations.

### **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 does not require any prerequisite courses.

#### Course Confirmation and Enrollment

- The student must be an active student at 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](mailto: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.
  - Once confirmed, the rotation may only be cancelled 30 days or more in advance of the start date.

### **ROTATION FORMAT**

Rotations are typically two weeks, three credit hours or four weeks, six 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 elective rotations, at the discretion of the instructor of record.

## GOALS AND OBJECTIVES

### GOALS

1. Develop an appreciation of the practice of nephrology as related to the specialty of the preceptor.
2. 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.
3. Demonstrate an understanding of the (seven) osteopathic core competencies (as applicable).

#### Educational Goals:

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

1. The clinical experience will emphasize the diagnosis and management of acute and chronic renal 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 renal disorders.

### OBJECTIVES

#### CLINICAL EVALUATION OF KIDNEY FUNCTION

1. Define and describe the importance of the glomerular filtration rate (GFR) in the setting of normal kidney function and compromised kidney function.
2. Be familiar with how to calculate the GFR using various mathematical equations.
3. Describe the role of serum creatinine, creatinine clearance and blood urea nitrogen (BUN), in regard to proper kidney function.
4. Explain how to interpret a dipstick urinalysis and urine microscopy.
  - o Recognize the pathophysiology and conditions associated with various urine casts.
5. Define hematuria and review the proper work-up of hematuria.
6. Be familiar with how to quantify proteinuria and the proper work up of proteinuria.
7. Explain the various imaging studies used to assess kidney function.
8. Review the indications, risks, and benefits of a kidney biopsy.

#### FLUIDS AND ELECTROLYTES

1. Define osmolality and be familiar with how to calculate the plasma osmolality.
2. Be familiar with how to calculate the osmolal gap and explain its significance.
3. Define **hyponatremia** and the various risk factors for hyponatremia.
4. Review the approach to the patient with hyponatremia using plasma osmolality, urine osmolality, and volume status.
5. Review the treatment of acute and chronic hyponatremia.
6. Define **hypernatremia** and its associated risk factors.
7. Review the approach to the patient with hypernatremia.
8. Differentiate between **central and nephrogenic diabetes insipidus** with regard to pathophysiology, diagnosis, and treatment.
9. Define **hypokalemia** and review the mechanism, causes and proper evaluation of

hypokalemia.

10. Describe the clinical manifestations and treatment of hypokalemia.
11. Define hyperkalemia and review the mechanism, causes and proper evaluation of hyperkalemia.
12. Describe the clinical manifestations and treatment of hyperkalemia.
13. Review **hypophosphatemia and hyperphosphatemia** with regard to its pathophysiology, causes, evaluation and proper treatment.

### ACID BASE DISORDER

1. Review how to interpret arterial blood gases and be able to classify each condition as acidosis or alkalosis, respiratory or metabolic and acute or chronic.
  - Be familiar with the expected compensation of each of these conditions.
2. Review the causes, clinical manifestations, and proper evaluation of **metabolic acidosis**.
  - Be familiar with the role of the anion gap, how to calculate it and the conditions associated with a high and low anion gap.
  - Be familiar with how to calculate the urine anion gap and be able to interpret its value.
  - Review the causes of **normal anion gap metabolic acidosis** and **anion gap metabolic acidosis**.
3. Review the causes, clinical manifestations, and proper evaluation of **metabolic alkalosis**.
  - Differentiate between saline-responsive and saline resistant metabolic alkalosis using the effective arterial blood volume and urine chloride.
4. Review the causes, clinical manifestations, and proper evaluation of **respiratory alkalosis**.
  - Review the acute and chronic compensations.
  - Briefly discuss the treatment of respiratory alkalosis
5. Review the causes, clinical manifestations, and proper evaluation of **respiratory acidosis**.
  - Review the criteria for acute and chronic respiratory acidosis.
  - Briefly discuss the treatment of respiratory acidosis

### HYPERTENSION (HTN)

1. Review the epidemiology and risk factors associated with HTN.
2. Be familiar with the current JNC8 guidelines for normal blood pressure, prehypertension, stage 1 HTN and stage 2 HTN.
3. Review the pathogenesis and management of essential HTN.
4. Review the incidence, pathophysiology, risk factors and management of secondary HTN including.
  - Kidney disease
  - Primary Aldosteronism
  - Renovascular HTN
  - Pheochromocytoma
5. Understand the characteristics of white coat HTN and be familiar with its management.

### TUBULOINTERSTITIAL DISORDERS

1. Review the pathophysiology, clinical manifestations, diagnosis, and evaluation of the various tubulointerstitial diseases including those caused by:
  - Immunologic
  - Infectious
  - Malignancy
  - Medications
  - Metabolic factors
  - Obstruction
2. Discuss the proper management of tubulointerstitial diseases.

### GLOMERULAR DISEASE

1. Review the pathophysiology and clinical manifestations of glomerular diseases.
2. Differentiate between the **nephrotic and nephritic syndrome**.
3. Review the conditions that cause the **nephrotic** syndrome with regard to the pathophysiology, diagnosis, clinical manifestations, and management.
  - Minimal Change disease
  - Focal Segmental Glomerulosclerosis
  - Membranous Nephropathy
  - Secondary causes including diabetic nephropathy, amyloidosis, multiple myeloma and HIV.
4. Review the conditions that cause the **nephritic syndrome** with regard to the pathophysiology, diagnosis, clinical manifestations, and management.
  - IgA Nephropathy
  - Membranoproliferative Glomerulonephritis
  - Hepatitis C and B Virus associated kidney disease.
  - Poststreptococcal Glomerulonephritis
  - Lupus nephritis
  - Anti-Glomerular Basement Membrane Antibody Disease
  - Small and Medium Vessel Vasculitis
  - Thrombotic Microangiopathy

#### ACUTE KIDNEY INJURY

1. Describe the characteristics/criteria of acute kidney injury (AKI)
2. Discuss the clinical manifestations and proper evaluation of AKI.
  - Be familiar with how to calculate the **fractional excretion of sodium (FEna)** and its implication.
3. Be familiar with the following classifications of AKI with respect to pathophysiology, risk factors, prevention, and treatment.
  - **Prerenal Azotemia**
    - Volume depletion
    - Hypotension
  - **Intrarenal Disease**
    - Tubular Necrosis
    - Acute Contrast Induced nephropathy.
    - Rhabdomyolysis and pigment nephropathy
    - Acute interstitial nephritis
  - **Postrenal Disease**
    - Obstruction
4. Briefly review the pathophysiology, criteria, and treatment of
  - Cardiorenal syndrome
  - Hepatorenal syndrome

#### KIDNEY STONES

1. Discuss the pathophysiology and epidemiology of kidney stones.
2. Discuss the clinical manifestation and proper diagnosis of kidney stones.
3. Review the risk factors and prevention of the following types of stones.
  - Calcium Oxalate stones
  - Struvite stones
  - Cystine stones
  - Uric Acid stones
4. Discuss the proper management of kidney stones both in the acute and chronic setting.

#### CHRONIC KIDNEY DISEASE

1. Define chronic kidney disease (CKD) and be familiar with its various stages.

2. Review the pathophysiology and epidemiology of CKD.
3. Review the screening protocols for patients at high risk of CKD.
4. Explain the clinical manifestations and proper evaluation of CKD.
5. Discuss the pathophysiology, risks, and management of the complications of CKD including:
  - Cardiovascular
  - Anemia
  - Chronic kidney disease and mineral and bone disorders
    - Renal osteodystrophy
6. Explain the role, indications, and various types of **dialysis**.
  - Discuss the common complications associated with dialysis.
7. Be familiar with the role of **kidney transplantation** in the patient with CKD.

## 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:  
**Nephrology.**

If you encounter any issues accessing this D2L course, please email the CA (on the title page of this syllabus).

### SUGGESTED STUDY RESOURCES

#### Recommended Texts

**Harrisons Principles of Internal Medicine 21st edition** (available online from MSU Libraries)  
<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/book.aspx?bookID=3095#265396326>

Part 2: Chapter 52 Azotemia and urinary abnormalities

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?sectionid=262791059&bookid=3095&Resultclick=2>

Part 2: Chapter 53 Fluid and Electrolyte disturbances

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?sectionid=265471636&bookid=3095&Resultclick=2>

Part 2: Chapter 55 Acidosis and alkalosis

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?sectionid=262791135&bookid=3095&Resultclick=2>

Part 6: Chapter 277: Hypertensive vascular disease

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?sectionid=265454202&bookid=3095&Resultclick=2>



Part 6: Chapter 278: Renovascular Disease

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?sectionid=265454352&bookid=3095&Resultclick=2>

**Harrisons Principals of Internal Medicine 21<sup>st</sup> edition** - Part 9: Chapter 303 Cell Biology and Physiology of the Kidney

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?bookid=3095&sectionid=263549775>

Part 9: Chapter 310 Acute kidney injury

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?bookid=3095&sectionid=265425859>

Part 9: Chapter 311 Chronic kidney disease

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?bookid=3095&sectionid=265425997>

Part 9: Chapter 312 Dialysis in the treatment of Kidney F

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?bookid=3095&sectionid=263549840>

Part 9: Chapter 314 Glomerular diseases

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?bookid=3095&sectionid=263549889>

**Harrisons Principals of Internal Medicine 21<sup>st</sup> edition** Part 9: Chapter 316: Tubulointerstitial diseases of the kidney

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?bookid=3095&sectionid=265426494>

Part 9: Chapter 318 Nephrolithiasis

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?bookid=3095&sectionid=263550180>

Part 22: Chapter S1 Fluid and electrolyte imbalances and acid-base disturbances: case examples

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?bookid=3095&sectionid=265476817>

Part 23: Chapter A4: Atlas of urinary sediments and renal biopsies

<https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/content.aspx?bookid=3095&sectionid=265476474>

Rennke HG and Denker BM. Renal Pathophysiology: The Essentials. 2014. Wolters Kluwer/ Lippincott Williams & Wilkins; Philadelphia. ISBN 978-1-4511-7338-3.

<http://ezproxy.msu.edu/login?url=http://meded.lwwhealthlibrary.com/book.aspx?bookid=2584>

**Harrisons Principles of Internal Medicine 21<sup>st</sup> edition** (available online from MSU Libraries)  
Hypertension references (JNC 8):

James PA, Oparil S, Carter BL, et al. 2014 evidence-based guideline for the management of high blood pressure in adults: report from the panel members appointed to the Eighth Joint National Committee (JNC 8). *JAMA*. 2014; 311(5): 479-489. doi:10.1001/jama.2013.284427.

<http://jama.jamanetwork.com.proxy1.cl.msu.edu/article.aspx?articleid=1791497>

Harold C. Sox, MD, Trustworthiness of high blood pressure guidelines. Editorial. JAMA 2014; 311(5): 472-474. <http://jama.jamanetwork.com.proxy1.cl.msu.edu/article.aspx?articleid=1791421>

Eric D. Peterson, MD, MPH; J. Michael Gaziano, MD; Philip Greenland, MD. The right goals and purposes for treatment hypertension. Editorial. JAMA 2014; 311(5): 474-476. <http://jama.jamanetwork.com.proxy1.cl.msu.edu/article.aspx?articleid=1791422>

Howard Bauchner, MD; Phil B. Fontanarosa, MD, MBA; Robert M. Golub, M. Updated guidelines: recommendations, review, and responsibility. Editorial. JAMA 2014; 311(5): 477-478. <http://jama.jamanetwork.com.proxy1.cl.msu.edu/article.aspx?articleid=1791423>

<https://sites.jamanetwork.com/jnc8/>

<https://www.ajmc.com/view/the-jnc-8-hypertension-guidelines-an-in-depth-guide>

**ROTATION REQUIREMENTS**

REQUIREMENT	SUBMISSION METHOD	DUE DATE Please refer to D2L for actual (month/day) due dates
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	Upload to D2L Drop Box	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.
Harrison's Questions Bank Quiz from Nephrology questions – Minimum 70% passing score. 25 question quiz for a 2-week rotation 46 question quiz for a 4-week rotation	Please submit only your first page with your score to the D2L drop box	11:59pm the last day of the 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

**The student who fails to turn in required paperwork, who has a verifiable reason 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.**

## WEEKLY READINGS/OBJECTIVES/ASSIGNMENTS

1. Review of the Nephrology Modules from the Genitourinary course pack will be of value to the student. There is no assigned textbook. Reading assignments are under the purview of the preceptor.
2. Harrison's Principles of Internal Medicine 21st edition (available online from MSU Libraries) <https://accessmedicine-mhmedical-com.proxy1.cl.msu.edu/book.aspx?bookID=3095#265396326>

## QUIZZES

3. Harrison's Question Bank Quiz  
Instructions for accessing In Access Medicine
  - Go to <https://lib.msu.edu/health/medicine/> then click on AccessMedicine.
  - Once in Access Medicine, select "Cases," then "Fluid/Electrolyte Acid Base Cases."
  - This will bring you to Harrison's Fluid/Electrolyte & Acid-Base Cases
  - Select "Go to Review Questions"

Create a 46-question quiz (25 if only 2 weeks) for yourself with the following guidelines:

- 46 available Section VII: Disorders of the Kidney and Urinary Tract

Submit your score sheet to the D2L Dropbox (You must achieve a minimum of 70%). You may take as many quizzes as it takes to achieve this. Each time you select the number of questions assigned the computer will select them from its question bank. This should help prepare you for COMAT and part 2 of boards. Please submit only the front page with your name and score to the drop box).

## 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.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.

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. 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

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 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 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**

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.

1. *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.
2. *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.
- It is the **student's** responsibility to notify the Clerkship Office ([com.clerkship@msu.edu](mailto:com.clerkship@msu.edu)) immediately if they are placed on quarantine or contract COVID.

## 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 that are necessary for successful program completion. Students are expected to take minimal time off outside of vacation periods built into student schedules and should only request additional 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 those requirements according to the respective course syllabus.

#### Excused Absences

Students must obtain documented approval for any full- or partial-day absence on a rotation.

**Excused absences** require the completion of the *Clerkship Program Excused Absence Request Form* by taking the following steps:

- Obtain appropriate signatures on the *Clerkship Program Excused Absence Request Form* at least 30 days prior to the date of the absence. An absence due to a sudden emergency is the exception to the 30-day advanced notice rule.
- Upload the completed *Clerkship Program Excused Absence Request Form* to the 'Excused Absences' folder (within the 'My Personal Documents' section) of a student's Medtrics profile.

**Unexcused absences** are full- or partial-day absences taken without the proper completion of the *Clerkship Program Excused Absence Request Form*, or any absences not covered 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). Unexcused absences may also have a negative impact on a student's rotation grade or evaluation.

**Students are not allowed to be absent from the first day of any rotation.**

- Due to the onboarding plans at most rotation sites, students must attend the first day of every rotation. Students must plan accordingly for personal days, interview days, COMLEX, etc.

**Maximum time off any rotation\***

Length of Rotation	Maximum Number of Days Off	
<b>4 weeks</b>	<b>2 days</b>	Should an absence exceed these limits, the student is responsible for requesting additional days off from the Associate Dean for Clerkship Education via email ( <a href="mailto:COM.Clerkship@msu.edu">COM.Clerkship@msu.edu</a> ) prior to the absence.
<b>2 weeks</b>	<b>0 days</b>	

*\*Exception: 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 for interview purposes only. If interview absences exceed these totals, the student must submit a Clerkship Program Excused Absence Request Form (with appropriate signatures obtained from the rotation attending and rotation site) to the Associate Dean for Clerkship Education via email ([COM.Clerkship@msu.edu](mailto:COM.Clerkship@msu.edu)) prior to the absence.*

Absence Type	Qualifications	Maximum Number of Days Off	Details	Required Approval from Associate Dean for Clerkship Education
Personal Day	May be used at the discretion of the student (example: illness, physician appt., conference time, etc.). <u>Total days off any one rotation (including personal days off)</u> cannot exceed two on any one 4-week rotation.	Five total days per academic year (July-June)	While personal days may be used at the discretion of the student, the <u>total</u> days off any one rotation (including personal days off) cannot exceed two on any one 4-week rotation, i.e., students cannot use all 5 days on one rotation.	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	Students have the time off to take the examination only	Students should be reporting to rotation before/after examination.	No
Prolonged Illness, Bereavement, Maternity Leave	Medical related absence or bereavement	Determined on a case-by-case basis	Students must contact the Associate Dean for Clerkship Education directly ( <a href="mailto:enright4@msu.edu">enright4@msu.edu</a> ) to discuss time off rotations.	Yes

**Clerkship Program Excused Absence Request Forms:** Once appropriate approval signatures are obtained, forms must be uploaded to the 'Excused Absences' folder within each student's Medtrics profile. Students should maintain a copy for their records.



## 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. They 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 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, but are not limited to, factors such as:

- 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 that 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.

### 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. The Handbook is updated annually during the summer semester, with changes effective when posted. Any subsequent changes are effective as of the date of issuance.

Students shall adhere to Michigan State University and College of Osteopathic Medicine policies, procedures, agreements, and guidelines. Violations of any regulation are subject to disciplinary action, up to and including program dismissal.

### 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.

This framework is built around the acronym CORE, representing Collaboration, Opportunity, Responsibility, and Expertise. Each domain encompasses values and examples of how they are demonstrated.

- **Collaboration:** Working together with others
  - **Interactive:** Interact effectively and respectfully with people you encounter; demonstrate honesty, genuineness, humility, and compassion
  - **Dynamics and Communication:** Demonstrate respect, civility, and courtesy in communication; communicate effectively with diverse individuals and groups for a variety of purposes using available technologies; employ active listening.
  - **Use of Feedback:** Identify sources of feedback; deliver and receive effective feedback for initiatives, evaluations and assessments, quality improvements, conflict resolution, and peer review.
- **Opportunity:** Encouraging an environment of mutual support
  - **Shared Leadership:** Exhibit advocacy for self and others; accept situational leadership as needed; establish mutual support and respect; participate as a support for others regardless of title or position.
  - **Problem-solving:** Recognize and define problems; analyze data; implement solutions; evaluate outcomes; include the perspectives of others

- Decision-making: Fulfill commitments; be accountable for actions and outcomes; discuss and contribute your perspective in group settings; listen to multiple viewpoints prior to making a decision
- **Responsibility:** Supporting a shared culture of accountability
  - Effective Use of Time and Resources: Invest time, energy, and material resources efficiently in order to provide effective services; demonstrate integrity and stewardship of resources.
  - Critical Thinking Skills: Recognize and differentiate facts, illusions, and assumptions; question logically; identify gaps in information and knowledge.
  - Mindfulness and Self-Care: Actively engage in surrounding circumstances and activities; self-assess, self-correct, and self-direct; identify sources of stress and develop effective coping behaviors.
- **Expertise:** Having relevant skills or knowledge
  - Core of Knowledge: Develop core professional knowledge; apply the knowledge in clinical, academic, and administrative settings.
  - Technical Skills: Show competency and proficiency in performing tasks that are integral to the scope and practice of your profession; identify needs and resources for learning; continually see new knowledge and understanding in your profession.

### 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

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.

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

## 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](http://www.rcpd.msu.edu). Once a student's eligibility for (clinical and/or testing) accommodation(s) are determined, the student may be issued a **Verified Individualized Services and Accommodations** (VISA) form. Students must present their VISA forms 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 VISA form 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.

## PATIENT TYPE AND PROCEDURE LOG

Student Name: \_\_\_\_\_ Student ID#: \_\_\_\_\_

### PATIENT TYPES AND PROCEDURE LOG

<b>Procedure</b>	<b>#Required</b>	<b>Date</b>	<b>Supervisor Initials</b>
Evaluate two patients with acute kidney injury	1. 2.		
Evaluate two patients with electrolyte disturbances	1. 2.		
Interpret 10 BUN/Cr/GFR and electrolyte sets to assess for acute or chronic kidney disease	1. 2. 3. 4. 5. 6. 7. 8. 9. 10.		
Participate in five Nephrology consults in the hospital or office.	1. 2. 3. 4. 5.		
Discuss with preceptor their recommendations regarding NSAIDS including Toradol (Ketorolac) for patients of varying ages			

## SUMMARY OF GRADING REQUIREMENTS

Requirement	Submission Method	Pass	No Grade Reported	No Pass
<b>Patient Types and Procedure Log</b>	See page at the end of syllabus and upload into D2L Drop Box for the course	Completed and submitted by 11:59 pm Last Sunday of Rotation	<b>The student who fails to turn in required paperwork, who has a verifiable reason they failed to do so, will be allowed a 2-week grace period, or more depending on the circumstances.</b>	<b>The student who fails to turn in required paperwork, who has a verifiable reason 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</b>
<b>Clinical Shift Schedule</b>	Upload to D2L Drop Box	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.		
<b>Harrison's Questions Bank Quiz</b> 25 question quiz for a 2-wk. rotation ; 46 question quiz for a 4-wk. rotation	Please submit only your first page with your score to the D2l drop box	<ul style="list-style-type: none"> <li>Completed and submitted by 11:59 pm Last Sunday of Rotation</li> <li>70% required to pass</li> </ul>		
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 and submitted by 11:59 pm Last Sunday of 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