



**Twin Cities Campus**  
**ACTING INTERNSHIP IN CRITICAL CARE (INMD 79XX)**  
**2024-25**

**CONTACT INFORMATION:**

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**Teaching Statement:** ICU medicine is a team sport. Navigating a patient through a complex, life threatening illness requires a systematic approach, attention to detail, open communication and collaboration. The sub-internship is the opportunity to further develop these skills as well showcase the knowledge and skills you have developed in the past three years to serve as the primary caregiver for your patients and become the leader of the healthcare team.



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**SYLLABUS STATEMENT:** The purpose of this document is to provide clarity about clerkship expectations. Consider using this document as a guide for this clerkship, and to provide transparency and accountability for all.

**CLERKSHIP DESCRIPTION:**

To prepare medical students for internship and residency, through a clinically-focused experience focusing on higher acuity patients (ICU, IMC), clinical care, and emphasizing tasks necessary for internship. Students will coalesce the skills developed in the past three years and the knowledge of pathophysiology and clinical epidemiology in order to develop a reasoned differential diagnosis. Finally, students will plan a logical

and practical diagnostic evaluation, using the principles of evidence-based medicine.

**Canvas Site:** <https://canvas.umn.edu/courses/377757>

**Clinical Sites:** Students will be placed in MICU, SICU, NICU, and PICU slots at various sites (see list below in *Site Specific Information*).

**Prerequisites:** Must be at least 6 weeks after the completion of [MED 7500](#) for MICU or GMED placements, [SURG 7500](#) for all SICU placements, or [PED 7501](#) for all NICU/PICU placements. Students may not take this course before SP3 of their 3rd year and may not take it after SP2 of their 4th year.

**Terms offered:** Fall, Spring, Summer

**Length of Clerkship:** 4 weeks

## PREAMBLE

The assessment of critically ill patients is multifaceted and dynamic. Acute and life threatening situations require timely response and thus performing both planned as well as quick intentional, focused assessments are essential in making timely diagnosis and implementing interventions that can positively impact patient outcomes. The extended critical care exam involves not only bedside evaluation but also incorporates the interpretation of medical technology as well as lab and imaging investigation in context of the patient presentation and clinical course.

## CLERKSHIP LEARNING OBJECTIVES:

Learning in this clerkship should be directed toward the following outcomes. Upon successful completion of this course, the learner will be able to:

Clerkship Learning Objective	Assessment	Graduation Competencies	Graduation Competencies Subdomain	Entrustable Professional Activities (EPAs)
1. Perform the tasks expected of an intern in the respective clinical environment, establish a role as primary provider of patients and communication responsibilities (i.e. hand off, sign out, deliver difficult news medical interpreter for families, etc).	AM002: Global Rating Scale	Patient Care Knowledge for Practice Practice-Based Learning and Improvement Professionalism	PC1, PC2, PC3, PC4, PC5, PC6 KP1, KP2  PBLI4  P1, P3, P7	1, 2, 3, 4, 5,8,9,
2. Triage and differentiate patients requiring urgent or emergent care and initiate assessment and reassessment in simulation and clinical environments; prioritize daily patient task list and clinical problems with a focus on reassessment.	AM002: Global Rating Scale AM012: Intentional Observation Exercises	Patient Care Knowledge for Practice Systems-Based Practice Scientific and Clinical Inquiry	PC1, PC3, PC4 KP1, KP2  SBP1  SCI1	1, 2, 3, 5,7,10,11
3. Seek additional help and recognize own limitations and need for assistance in medical urgencies or emergencies and in daily practice.	AM002: Global Rating Scale AM012: Online Case Review, Intentional Observation Exercises AM014: Portfolio	Patient Care Knowledge for Practice Interpersonal and Communication Skills Professionalism	PC3, PC5, PC6 KP3  ICS3  P2, P3, P4	7, 10, 13
4. Formulate appropriate initial and ongoing	AM002: Global Rating Scale	Patient Care	PC3, PC4, PC6 KP1, KP2	1, 2, 7,

<b>health care plans, including decisions that consider both restorative and palliative care goals that take into account your individual patient values and goals.</b>	AM012: Intentional Observation Exercises	Knowledge for Practice Practice-Based Learning and Improvement Professionalism	PBLI1, PBLI3, PBLI5  P1, P2, P3, P4, P5, P6, P7	
<b>5. Communicate and coordinate effectively with members of an interprofessional care team and with patients and families, including informed consent discussions.</b>	AM001: System Operation Center AM002: Global Rating Scale AM012: Intentional Observation Exercises AM014: Portfolio	Patient Care Interpersonal and Communication Skills Interprofessional Collaboration	PC5 ICS2, ICS3  IPC1, IPC2	8, 9, 11,
<b>6. Demonstrate advanced clinical reasoning that takes into account evolving evidence and standards of care and concept of clinical equipoise and diagnostic uncertainty in complicated clinical conditions.</b>	AM002: Global Rating Scale AM012: Online Case Review, Intentional Observation Exercises	Patient Care Knowledge for Practice Practice-Based Learning and Improvement Scientific and Clinical Inquiry	PC3, PC4, PC5 KP1, KP2  PBLI4  SCI1	2, 3 ,4, 10
<b>7. Gain experience and familiarity with the approach to and techniques of common ICU procedures, including lines, fluid acquisition and active resuscitation (ACLS, CPR, etc)</b>	AM002: Global Rating Scale AM014: Portfolio	Patient Care Interpersonal and Communication Skills Professionalism	PC6 ICS3  P7	11, 12,13
<b>8. Understand risk-benefit calculus interventions and recognize efforts to mitigate complications with an unrelenting focus of patient safety; identify and report patient and system failures.</b>	AM002: Global Rating Scale AM012 AM014: Portfolio	Practice-Based Learning and Improvement Scientific and Clinical Inquiry Professionalism		7,13

Reference table:

Institutional Goals & Objectives	Entrustable Professional Activities	Methods of Instruction
<a href="#">UMN Competencies Required for Graduation</a>	Refer to <a href="#">EPAs</a>	Refer to <a href="#">AAMC Categories</a>

## REQUIRE CLERKSHIP ENCOUNTERS (RCE):

*Expectation:* Successful completion of RCE (formally Patient Encounter Tracking (PET) to document clinical exposure is a requirement for graduation. At the end of each inpatient day, log RCE experiences in Qualtrics.

*Purpose of Required Clerkship Exposures (RCE):* Upon completion of the core required clerkships, all University of Minnesota Medical Students will have learned about a common set of conditions, procedures, and presenting symptoms. This list was created by an interdisciplinary team made up of clinical faculty, foundational science faculty, and students from both campuses to encompass high yield learning opportunities that any medical student, regardless of speciality, should experience and learn.

*Clerkship Specific PET List:* To see which of the required PET conditions, procedures, and presenting symptoms you will be learning about in the clerkship, please visit the PET page on the Clerkship Canvas site.

# Required Clinical Experiences (RCE) :

## CONDITIONS

1. Respiratory insufficiency or failure - **Primary Participation**
2. Vascular obstruction - Observation
3. Disorders of electrolyte balance (acid-base) - **Primary Participation**
4. Respiratory infection or inflammation - **Primary Participation**
5. Sepsis - **Primary Participation**

## SYMPTOM

1. Dyspnea

## CLERKSHIP OUTLINE AND CONTENT:

### ATTENDANCE

**Four week rotation, one of the four weeks is expected to be nights**

**One, single day weekend and one, two-day weekend every two weeks of service** (Final Sat-Sun = 2 day weekend) unless prior arrangement or additional time required

**One ½ day of Independent Learning Time (ILT) every two weeks** Student responsibility to schedule : Coordinate with team; use is as discretion of student

**Professional Allowance , 1/2 day per two weeks (if needed)** Interviews, Illness, Jury duty, Military service, Personal or family crises, etc...If these additional days are needed please talk to your site director.

One out of the 4 weeks

### Sample Clerkship Weekly Calendar (4 Week Traditional Rotation)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<b>WEEK 1</b>							
S1	Site Orientation	DAY 1	DAY 2	DAY 3	DAY 4 IOE Orientation (all students)	DAY 5	<b>OFF</b>
S2	Rotation Orientation	DAY 1	DAY 2	DAY 3	DAY 4 IOE Orientation (all students)	<b>OFF</b>	DAY 5
<b>WEEK 2</b>							
S1	NIGHT 1	NIGHT 2	NIGHT 3	NIGHT 4	NIGHT 5	<b>Golden Weekend</b>	
S2	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	OFF
<b>WEEK 3</b>							
S1	ILT (PM)	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	OFF
S2	NIGHT 1	NIGHT 2	NIGHT 3	NIGHT 4	NIGHT 5	<b>Golden Weekend</b>	
<b>WEEK 4</b>							
S1	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	<b>OFF</b>	
S2	ILT (PM)	DAY 2	DAY 3	DAY 4	DAY 5	<b>OFF</b>	

## GRADING AND ASSESSMENT:

The goal is to evaluate individual learning and performance of Clerkship Learning Objectives in this clinical rotation.

### Assessment Grid:

Component	Description
1. EPA (~#12)	Formative assessment of core EPAs via observation of cases
2. Clinical Skills Assessments (#2)	Assessment from supervisors, residents, etc (mid-clerkship and end-of-rotation CSAs) with commentary/feedback regarding your performance
3. Clerkship Specific Assignments	Assignments and task pertinent to work of AI in Critical Care

**Clinical Performance Distinctions:** PASS/FAIL

### Failing grades in medical student clerkships can be assigned based on:

Unprofessional Behavior

Unsatisfactory Clinical Performance, or Failure in timely completion of assignments (Portfolio)

## COMPONENTS

### A. EPAa.

**~Twelve EPAs are anticipated for the month with completion of EPA #1 the only required EPA**

For AY 24/25, outside of EPA 1, students will not be required to complete specific EPAs for each clerkship. Instead, students will be provided opportunities to demonstrate specific EPAs in each clerkship. And, students will continue to be required to submit, on average, 3 EPA supervision levels per week. The widespread opportunities to demonstrate EPAs, paired with required clinical coaching, will allow students to develop personalized plans for gathering EPA supervision levels to support entrustment by their Clinical Competency Committee.

### **Common EPAs Historically Associated with INMD 79XX**

- EPA 1 - Gather and H&P - (#1 required, )
- EPA 2 - Prioritize a differential diagnosis
- EPA 8 - Hand-off/sign off observations
- EPA 9 - Collaborate as a member of an interprofessional team
- EPA 10 - Cross cover/recognize a patient that requires urgent or emergent care
- EPA 11 - Partake in consent documentation/procedure discussion

- EPA 12 Partake in procedures (lines, thora, etc, death exam also counts as a procedure as it is protocolized)
- EPA 13 - Participate in patient safety and culture - complete ICU daily rounding checklist

B. **Clinical Skills Assessment (CSA)/Feedback**: Performed mid clerkship and at the end of clerkship by attending(s) you've worked with. Housestaff can contribute but attending needs to submit the form. Student identifies preceptor/attending and/or site director. Midclerkship - is an in person meeting with your attending (phone or zoom acceptable). Final CSA can either be in person or remote (student can send preceptor a fillable pdf form to complete). Requirements: attending evaluation.

Clinical skills rated on 5 professional criteria:

**The combined average of all five criteria must be 3.5 or higher in order to be considered passing. (Final CSA)**

1. Demonstrates awareness of their own strengths and limitations, and actively works to improve their own knowledge and practice.
2. Communicates effectively with patients and families
3. Demonstrates compassion, integrity, and respect for others.
4. Demonstrates flexibility and maturity in adjusting to change, stress, and ambiguity
5. Demonstrates the critical thinking skills needed for applying basic and clinical sciences to patient care

PLUS

6. Required Comments: For growth (non MSPE) and MSPE

PLUS

Attending attestations (mid clerkship CSA) : Required Clinical Exposure (RCE), Entrustable Professional Activities (EPA) - ensure case/experiences being logged (See Below required clinical experiences)

C. **Acting Internship Portfolio**. This is your "to do" list for your month in the ICU. Similar to daily tasks on clinical rounds, these are the tasks expected (and rationales, EPA) to be completed

**Critical Incident Reflection** Short composition: reflecting on unique experience in ICU

- a) Reflect on issue or experience that may have been distressing or reveals (mechanism to debrief)
- b) Reflect on opportunity for improvement, near miss, etc ( introduction to quality improvement)
- c) Comment and advocate for patients ; ~ critical illness often exacerbates or surfaces pre-existing health inequities, social discord, failed public health measure

**IOE and Generative AI Exercises** - video-based case review. Further instructions are provided on the Canvas site. Students will:

Objectives:

- a) Apply and refine your clinical observational and care summary skills
- b) Review the use of generative AI's in medical education by way of the content presented
- c) Discuss the responsibilities in using AI in the medical field
- d) Compare/contrast an AI constructed ICU progress note and summary assessment vs. one's own construction.
- e) Develop a critical lens for using AI in the medical field
- f) Explore their own ideology regarding AI use in the medical field

Activity in Summary (details of components on Canvas Site):

- 1. Read AI Articles (3)
- 2. Watch the case video
- 3. Part A: Create a ICU summary assessment and answer clinical questions:
  - a. What is the most likely diagnosis and why?
  - b. What are all the clinical issues
  - c. What do I need to be worried about immediately?
  - d. What is the next best step in continuing care for this patient?
- 4. Part B: Use your ICU Summary as a prompt ask a chatbot (AI) to answer the same clinical questions (a-d above)
- 5. PART C: Compare your clinical answers with those produced by your chatbot and answer specific questions regarding your chatbot experience.
  - i) What AI model was employed\*? (chatgpt, Google gemini, etc.)
  - ii) Does the LLM output align with your original response?
  - iii) How does the output align with traditional medical resources?
  - iv) Did the LLM query influence or change your management?
  - v) Where in the clinical reasoning process do you think LLM/chatbots would be most helpful?
  - vi) What methods did you employ to verify the accuracy and veracity of the generated response? (do you endorse or refute the LLM output?)

Considerations:

- Is there potential for demographic bias in the answer received?
- What, if any, potential for harm in the answer you received?
- Is there omission of important information in the answer?
- Conversely is there inclusion of irrelevant content?
- Is there evidence of hallucinations in the response provided?

## ASSIGNMENT SCHEDULE AND DUE DATES

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<b>WEEK 1</b>							



TASKS	Orientation Site (AM) Rotation (PM)	EPA/RCE	EPA/RCE	EPA/RCE	IOE/AI Orientation (Virtual) (PM)	EPA/RCE	EPA/RCE
<b>WEEK 2</b>							
TASKS	EPA/RCE	EPA/RCE	EPA/RCE	EPA/RCE	PART A Submission Due Mid Clerkship Feedback	EPA/RCE	Critical Incident reflection*
<b>WEEK 3</b>							
TASKS	EPA/RCE	EPA/RCE	EPA/RCE	EPA/RCE	PART B and C Submission 2 Due	EPA/RCE	EPA/RCE
<b>WEEK 4</b>							
TASKS	EPA/RCE	EPA/RCE	EPA/RCE	EPA/RCE	Completed Portfolio!!	OFF/Make up days	

\*Example of timing

**Site Specific Information:**

- MICU
  - FR: Fairview Ridges, 201 E Nicollet Blvd, Burnsville, MN
  - FS: Fairview Southdale, 6401 France Ave S, Edina, MN
  - FU: UMMC-Fairview, 500 Harvard St. SE, Minneapolis, MN
  - HC: Hennepin County Medical Center, 701 Park Avenue, Minneapolis, MN
  - NW: Abbott Northwestern, 800 E 28th St., Minneapolis, MN
  - RH: Regions Hospital, 640 Jackson St., St. Paul, MN
- MICUD: Essentia Duluth
  - St. Mary's Medical Center - 407 E 3rd Street, Duluth MN
- SICU
  - FU: UMMC-Fairview, 500 Harvard St. SE, Minneapolis, MN
  - HC: Hennepin County Medical Center, 701 Park Avenue, Minneapolis, MN
  - RH: Regions Hospital, 640 Jackson St., St. Paul, MN
- NICUFU: Masonic Children's Hospital, 2450 Riverside Ave, Minneapolis, MN
- PICUFU: Masonic Children's Hospital, 2450 Riverside Ave, Minneapolis, MN
- GMED
  - FU: UMMC-Fairview, 500 Harvard St. SE, Minneapolis, MN
  - VA: VAMC, 1 Veterans Drive, Minneapolis, MN

Clerkship Resources: See Canvas site.

**COURSE GUIDELINES AND POLICIES:**

<b>All Medical Student Policies</b>	<a href="#">University of Minnesota Medical Student Policies</a>
<b>Attendance and Excused Absences</b>	<a href="#">Attendance Requirements and Excused Absences</a>
<b>Disability Resources</b>	<a href="#">Medical Students with Disabilities</a>
<b>Duty Hours</b>	<a href="#">Duty Hours, Years 3 &amp; 4</a>
<b>Grades and Incomplete Contracts</b>	<a href="#">Grading &amp; Grade Appeals</a>
<b>Mistreatment</b>	<a href="#">Student Mistreatment Policy</a>
<b>Professionalism</b>	<a href="#">Student Conduct Code</a>
<b>Remediation</b>	<a href="#">Scholastic Standing Committees</a>
<b>Syllabus Change</b>	Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.