



**2026 - 2027 Academic Year  
Neurology Clerkship Syllabus  
Course #: COM 721  
Year: M3**

**Course Dates:** Varies

**Credits Hours:** 1 credit per week

**Offered as:** 4-week rotation

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Every effort will be made to adhere to the contents of this syllabus. However, this document is subject to changes in the event of unforeseen, extenuating circumstances. Students will be notified as soon as possible if changes in the syllabus become necessary.

Additionally, this syllabus provides clerkship-specific expectations and requirements. All students are also subject to the policies outlined in the M3 Clerkship General Handbook. Where differences exist, clerkship-specific requirements in this syllabus apply, provided they do not conflict with institutional policies.

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## Course Description

In a typical primary care setting, approximately 10% of patients will have a neurological complaint, and about 1% to 2% of those will eventually be diagnosed with a definite neurological problem, [according to the National Institutes of Health \(NIH.gov\)](#). While most neurological issues can be managed by primary care physicians, a significant number of patients are also referred to or seen by neurologists. In fact, primary care providers (PCPs) handle a larger proportion of neurological visits than neurologists, with PCPs performing 40% of such visits compared to neurologists' 17.5%, [according to the University of Michigan Library](#). The most suitable setting in which to lay the foundation for that understanding is in a neurology clerkship in the clinical phase of medical school. This document outlines the desirable components of a clinical neurology clerkship.

The principal goal of the clerkship is to help refine skills in taking a neurologic history and performing a thorough neurologic examination. Many physicians will eventually practice in settings where acute neurologic consultation is available only by phone. The better historical and examination information provided, the better the quality of the advice that can be given by a Neurologic consultant regarding immediate interventions needed. In addition, the clerkship provides the opportunity for students to experience various presentations of neurologic disease in a clinical setting. This is essential for students to develop a better understanding of disease manifestation and become good clinicians.

The purpose of the neurology clerkship is not to train neurologists - that is the goal of residency training. The goal of the neurology clerkship is to provide students with the fundamental skills required by all physicians to recognize, diagnose, and formulate an initial treatment plan for patients with common neurologic disorders.

## Course Learning Objectives (Summary)

**Goal:** To teach the principles and skills underlying the recognition and management of the neurologic diseases a medical practitioner is most likely to encounter in practice. Students can meet these goals by examining patients with both acute and chronic neurologic problems in both the inpatient and outpatient settings.

The overarching goals of the clerkship are to:

- a. Refine the neurologic history taking and examination
- b. Localize lesions
- c. Develop a reasonable differential diagnosis
- d. Outline an initial diagnostic and treatment plan

## Learning Objectives

1. Apply knowledge of basic & clinical sciences into medical practice.
2. Obtain and deliver a complete clear, concise, and thorough oral & written presentation of a patient's history and examination.
3. Distinguish normal from abnormal findings and the ability to localize the likely sites of lesion in the nervous system from available clinical information
4. Learn to perform certain procedures including lumbar puncture
5. Learn to utilize and interpret common tests used in diagnosing neurologic disease
6. Formulate a differential diagnosis based on clinical information, lesion localization, and relevant

historical and demographic features

7. Demonstrate an awareness of the principles underlying a systematic approach to the management of common neurologic diseases
8. Review and interpret the medical literature (including electronic databases) pertinent to specific issues of patient care and its application towards evidence-based practice.
9. Demonstrate professionalism and effectively communicate with patients, caregivers, peers, members of the patient care team, and faculty to work collaboratively in patient care
10. Adapt to work in different health delivery systems and to use various forms of health information systems
11. Demonstrate skills of time management, stress coping, non-confrontational negotiation, and self-assessment and reflection in his/her/their medical practice.

Detailed learning objectives and assessment mapping can be reviewed below.

### **Educational Framework and Competency Alignment**

This clerkship is aligned with nationally recognized frameworks for medical education, including the Accreditation Council for Graduate Medical Education (ACGME) Core Competencies, the institution's Educational Program Objectives (EPOs), and the Association of American Medical Colleges (AAMC) Core Entrustable Professional Activities (EPAs).

The curriculum is designed to support development across the following competency domains:

- Patient Care
- Medical Knowledge
- Communication and Interpersonal Skills
- Professionalism
- Systems-Based Practice
- Practice-Based Learning and Improvement

Course learning objectives, instructional activities, and assessment methods are intentionally aligned with these domains to ensure a comprehensive and competency-based educational experience. Detailed mapping of learning objectives to EPOs and EPAs is provided in the Appendix.

### **Prerequisites**

Students must successfully pass all M1 and M2 courses and must successfully pass Step 1 before starting any M3 clerkships.

## Rotation Information

Rotation locations, directors, preceptors and contacts are subject to change.

Rotation locations,  
directors, preceptors,  
contacts

Please refer to the catalog M3 for rotation locations, directors, preceptors and contacts.

## Schedule

All schedules are designed to remain within institutional duty hour limits.

### Rotation Sites Daily and Weekly Schedule Overview

Operational details of the daily and weekly schedule are determined by the clinical team and supervising attending, within clerkship and institutional duty hour guidelines. In general, students will work Monday through Friday. Students on inpatient services may be required to attend one weekend day based on service and attending expectations. Students will not be required to take overnight call. Important variations in the schedule are:

- The first morning of the rotation will be spent at the College of Medicine for orientation and assignment of clinical sites.
- Some part of the clerkship will focus on didactics sessions, oral presentations and virtual learning including assignments of virtual cases, physical exam learning and other subjects (details below)
- The last day of the rotation is reserved for the NBME Subject Exam. This will take place at the College of Medicine unless otherwise indicated.
- Students rotating through private offices will follow the schedule set by those physicians, including days when the office is not open.

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## Learning Sessions (Including Didactics)

### Schedule:

All students will receive structured learning sessions (seminars) during their clinicals and during didactics. Students are expected to read in preparation for each session. A limited amount of lectures may be delivered, but as a rule, sessions will focus on cases, answering student questions, and applying knowledge from the text. Formative quizzes may be given.

### Orientation Day:

The first Monday morning of the clerkship will begin with orientation at the College of Medicine or remote. Salient points of this syllabus and clerkship requirements will be reviewed, as well as main point of this handbook and specific site assignments.

### Didactic and virtual learning

This will include didactics by faculty, case and topic oral presentations by students and independent work on cases and subjects including Neurologic Exam, Neuroradiology and Neuroanatomy. Students should come prepared to provide a case history to the faculty and other students in the manner in which the case unfolded in the student's experience. Students should bring copies of relevant imaging studies if possible.

Didactic Presentations from faculty will likely include the following subjects: Altered Mental Status,

Stroke, Neuroimaging, Multiple Sclerosis, Movement disorders, Functional Neurologic Disorders, Spine disorders, Infections related to Neurologic disorders, Seizure, Headache, Acute and Ambulatory Neuromuscular conditions.

## Learning Activities

### Must See Clinical Experiences and Must Do Procedures

Students are required to maintain a log of designated “**Must See**” clinical experiences and “**Must Do**” procedures using the institutional tracking system (e.g., MedHub).

- **Must See Clinical Experiences** are specialty-specific patient encounters that represent core conditions essential to the clerkship’s educational objectives. Students are expected to actively seek and document these encounters during the rotation.
- **Must Do Procedures** are core clinical skills expected across clerkships and should be logged throughout the M3 year, regardless of when or where they are performed. All required procedures should be completed prior to the start of the M4 year if possible.

Your participation goal varies from procedure to procedure. You may either:

- **Observe** (watch your preceptor perform and learn)
- **Participate** (“scrub-in” or hands on helping involvement)
- **Perform/Manage** (actually perform the procedure, but with Preceptor monitoring your performance)

Note: procedures should not be performed by a student without the explicit approval of your preceptor

Students are expected to make consistent progress toward completing required experiences and procedures throughout the rotation. The Clerkship Director will monitor completion.

Failure to complete required clinical experiences or procedures may result in remediation, additional assigned work (e.g., case reports or alternative learning activities), or impact the final grade.

<p><b>Required Clinical Experiences (“Must see cases”)</b></p>	<ul style="list-style-type: none"> <li>• Toxic-metabolic encephalopathy,</li> <li>• Coma, infections, increased intracranial pressure</li> <li>• Seizures, epilepsy, status epilepticus</li> <li>• Movement disorders, Parkinson’s Disease, essential tremor</li> <li>• Multiple sclerosis</li> <li>• Neuromuscular disorders including peripheral neuropathy, carpal tunnel syndrome, Bell’s Palsy, radiculopathy, myopathy and neuromuscular junction disorders</li> <li>• Alzheimer’s Disease and dementia</li> <li>• Stroke (ischemic or hemorrhagic)</li> <li>• Migraine / headache</li> </ul>
<p><b>Required Procedures (“Must do procedures”)</b></p>	<ul style="list-style-type: none"> <li>• There are no clerkship-specific required procedures for this clerkship. Students are expected to continue logging core clinical procedures in accordance with M3 program requirements.</li> </ul>

## Clerkship Educational Content and Required Clinical Experiences

- A. Recognizing that history is the key to the neurologic evaluation, perform a competent history noting the following key factors:
1. Establish the onset, progression (temporal profile) and character of the disorder identifying all related symptoms and exacerbating/relieving factors
  2. Perform a standard neurological review of symptoms with regard to personality, memory, headaches, pain, seizures, impairments of consciousness, vision, hearing, language function, swallowing, coordination, gait, weakness, sensory alterations, sphincter disturbance and involuntary movements, etc.
- B. The Neurologic Examination (as an integral component of the general medical examination)
1. How to perform a focused but thorough neurologic examination [see Appendix 1]
  2. How to perform a screening neurologic examination [see Appendix 2]
  3. How to perform a neurologic examination on patients with an altered level of consciousness [see Appendix 3]
  4. How to recognize and interpret abnormal findings on the neurologic examination – localization and differential diagnosis [see Appendix 4]
- C. Localization - general principles differentiating lesions at the following levels:
1. Cerebral hemisphere
  2. Posterior fossa
  3. Spinal cord
  4. Nerve root/Plexus
  5. Peripheral nerve (mononeuropathy, polyneuropathy, and mononeuropathy multiplex)
  6. Neuromuscular junction
  7. Muscle
- D. Symptom Complexes - a systematic approach to the evaluation and differential diagnosis of patients who present with:
- |                                  |  |
|----------------------------------|--|
| 1. Focal weakness                | 14. Aphasia  |
| 2. Diffuse weakness              | 15. Headache   |
| 3. Clumsiness                    | 16. Focal pain (Facial pain, Neck pain, Low back pain, Neuropathic pain) |
| 4. Involuntary movements         | 17. Numbness or paresthesia  |
| 5. Gait disturbance              | 18. Transient or episodic focal symptoms                                 |
| 6. Urinary or fecal incontinence | 19. Transient or episodic alteration of consciousness                    |
| 7. Dizziness                     | 20. Sleep disorders  |
| 8. Vision loss                   | 21. Developmental disorder   |
| 9. Diplopia                      |  |
| 10. Dysarthria                   |  |
| 11. Dysphagia                    |  |
| 12. Acute mental status changes  |  |
| 13. Dementia                     |  |
- E. Approach to Specific Diseases - general principles for recognizing, evaluating and managing the following neurologic conditions (either because they are important prototypes, or because they are potentially life-threatening)

## Required Patient Types

According to national data, on average, about 80% of neurology students work up 1 outpatient in detail every day or every other day. A minimum number of contact experiences for specific types of patients has been determined based on published data, and local practice patterns. Over the course of the four-week rotation students should see and examine a minimum of:

- a) 2 patients with stroke/TIA;
- b) 2 patients with an episodic disorder (e.g., headache, seizure);
- c) 1 patient with coma/altered mental status (coma strongly recommended if possible);
- d) 2 patients with neurodegenerative disease (e.g., dementia, movement disorder); and
- e) 2 patients with peripheral neurologic disease (e.g., neuropathy, neuromuscular disease).

In addition, it is strongly recommended for students to see and/or assist in performance and interpretation of neurologic procedures, including the following:

- a) Lumbar puncture
- b) EMG/NCS studies
- c) EEG
- d) CT
- e) MRI

These are goals for the overall clerkship; not every type of patient or every procedure must be seen in each setting.

Each student is required to track all Highly Recommended Cases with documentation. Optional procedures and other cases seen can also be added to MedHub for those students who want to track this information.

**Students are responsible for using MedHub to track the “must see” patients they see during their rotation. Failure to complete this documentation may result in review by the Student Promotions Committee.**

The need for this stringency is that the College of Medicine is required by the LCME and best educational practices to demonstrate adequate diversity of exposure to various patient populations, especially in the early years of curriculum implementation. Students must take this mission seriously not only for their own education, but also for quality control in the college.

If a live patient experience is not possible for some given condition, students will, at the discretion of the clerkship director, use some combination of the following resources to round out their clinical knowledge:

- a) Completion of relevant case in online database or equivalent
- b) Continuum: high-quality, peer reviewed, clinical CME publications of the American Academy of Neurology
- c) Literature review with directed readings and discussion with the clerkship director or other neurology faculty
- d) Preparation and presentation to neurology faculty of a short oral or written summary on a given topic
- e) Use of the resources in the COM Clinical Skills and Simulation Center which may include an encounter with a standardized patient; use of computer-based or mannequin simulation; or use of part-task trainers (e.g., lumbar puncture simulation model)

## **Student Responsibilities & Expectations**

Students are expected to actively participate in all clinical and educational activities and function as engaged members of the healthcare team. Responsibilities include:

- Participating in patient care under appropriate supervision, including history-taking, physical examination, and clinical reasoning
- Preparing and delivering oral case presentations
- Completing clinical documentation as expected by the clinical site and clerkship
- Attending all required clinical sessions, didactics, and assigned activities
- Demonstrating professionalism, including punctuality, accountability, and respectful communication
- Seeking and incorporating feedback to improve clinical performance

All clinical activities must be performed under the supervision of a licensed provider, and students should not perform procedures or provide medical advice independently.

## **Preceptor Responsibilities and Expectations**

Preceptors are expected to:

- Provide direct supervision appropriate to the student's level of training
- Observe and provide feedback on core clinical skills, including history-taking, physical examination, and clinical reasoning
- Offer ongoing formative feedback and complete a mid-clerkship evaluation (typically by the end of week 2)
- Complete a final evaluation with both ratings and narrative comments in a timely manner
- Support student participation in clinical and didactic activities

## **Assignments and Requirements**

Students are required to complete all assigned coursework and clinical documentation as part of the clerkship. These may include:

- Written clinical documentation (e.g., history & physicals, progress notes, or case write-ups)
- Oral or written presentations
- Participation in didactic sessions and discussions
- Completion of required clinical logs (Must See cases and procedures)

All assignments must be completed and submitted as directed. Failure to complete required assignments may result in remediation or impact the final grade.

## **Course Materials**

### **Library/Learning Resources:**

The CNUCOM Library and Learning Resource Center is available for students, faculty, and staff. This center includes: Library Facility and Collection, Computer resources, CNUCOM Electronic Library, and Interlibrary Loan Program. CNUCOM Resource Center maintains an Electronic Learning Resources System to provide information resources to students, faculty, and staff, and serve as an entry point for all users to meet their academic and research needs.

## **Required/Recommended Textbook(s), Material(s), and Equipment**

**Recommended**

1. Harrison’s Principles of Internal Medicine, 20e, by Jameson et al.: Part 13; sections 1-3. (Available on Access Medicine)
2. Adams and Victor Principles of Neurology 11e, Allan H. Ropper, et al. (On Access Medicine)
3. Clinical Neurology 10e Roger P. Simon, Michael J. Aminoff, David A. Greenberg
4. Preparation for Shelf Exam prep: one of the following
  - a. Neurology Pretest Self-Assessment and Review, 9th edition, by David Anshel (for shelf exam prep) Note: Also available in USMLE Easy.
  - b. NBME Clinical Sciences Subject Exam Self-Assessment Tests (fee required)
5. Case Files in Neurology (in Access Medicine) – for clinical rotation information

## Assessment

### Assessment Components

Student performance in the clerkship is based on multiple components, including:

- NBME Shelf Examination
- Clinical performance evaluations by preceptors
- Clerkship Director assessment
- Completion of required assignments and participation in didactic activities
- Completion of required clinical logs

### Assessment of Achievement of Learning Objectives

Student achievement of the course learning objectives is evaluated through the following methods:

<b>Skills Log</b>	Students are required to log a set of “ <b>Must See Clinical Experiences</b> ” unique to each clerkship. In addition, they are required to log a set of “ <b>Must Do Clinical Procedures</b> ” over the course of the M3 and M4 years. Failure to complete these logs may lead to a lowering of the clerkship grade (at the discretion of clerkship director).
<b>Clinical Evaluations</b>	<p>All students are required to obtain a <b>Mid-Clerkship Evaluation</b> for any rotation lasting four (4) weeks or longer. This written evaluation must be completed by a supervising preceptor, reviewed face-to-face with the student, and submitted to the clerkship director for review. This must be completed by the midpoint of the rotation. Students are responsible for ensuring completion.</p> <p>At the conclusion of the rotation, the site director (preceptor) is responsible for submitting a formal <b>Preceptor Evaluation of Student</b>, which includes scaled performance ratings across the ten (10) Clerkship Learning Objectives (CLOs) and a written narrative evaluation of the student’s performance.</p>

<b>Oral Presentation</b>	Students may be required to present oral case reports and/or clinical summaries on the wards, in clinic, and/or in didactics. These presentations will be assessed for accuracy and relevance by their preceptors, and by their clerkship director.
<b>Shelf Exam</b>	The <b>NBME Subject Shelf Examination</b> for all clerkships in which a shelf examination will be administered. Students must pass this exam at the 5th percentile or above to pass the clerkship.

**The NBME Subject Examination in Neurology** will be used as an assessment of fundamental medical knowledge. This examination has excellent psychometric properties and statistical validity to assess student knowledge over a wide range of neurologic data. The trend nationally is to set the passing grade for the third-year neurology clerkship at about the 5<sup>th</sup> percentile. Performance at or above this level is thought to represent a knowledge base sufficient for the non-specialist, third-year clinical clerk to proceed with training in other clinical disciplines.

The NBME exam will be administered on the last day of the clerkship at the College of Medicine, unless otherwise specified or authorized. Standard NBME timing will apply. Students arriving late for the examination will not be given extra time for completion. Extra time may be allotted to students who have requested it based on medical needs.

#### **Written Patient Notes and Reports**

Neurologic history and physical exam notes are an essential part of clinical participation: Students are expected to maximize the number of notes taken during the clerkship. Attending preceptors may have additional requirements such as daily SOAP notes as part of delivering effective clinical care.

In addition, part of the final clerkship grade will be based on submitting to the Clerkship Director required number of history and physical reports. These reports should be submitted by students CNU email address to the clerkship director or reported online as directed. It is important these reports are HIPAA compliant and omit any specific clinical identifying data (name, date of birth, etc.)

***History and Physical report submitted to Clerkship Director:*** During the initial weeks of the rotation, each student must select one H&P to be submitted to the Clerkship Director. It is due the end of the first week (exact deadline will be given at the beginning of the rotation). A write up that is judged sub-standard by the clerkship director may also be returned to the student for revision and re-evaluation. Failure to meet these requirements may result in assignment of remedial work before receiving a final grade in the clerkship rotation (including, but not limited to, additional written or clinical assignments, oral examination, or written essay examination). There may be small deductions for late reports. Please see Canvas for more specific details and examples of sample model H&Ps

Grading Rubric for History and Physical reports (see detailed H&P instructions in separate document)

Score	Exceeds Expectations (100%)	Meets Expectations (75-87.5%)	Needs Improvement (50-62.5%)
<b>1) CC/HPI: 1.25 point</b>	<ul style="list-style-type: none"> <li>Includes source of history</li> <li>Includes Chief Complaint</li> <li>Includes <b>all</b> key components in HPI including detailed first sentence of HPI.</li> </ul>	<ul style="list-style-type: none"> <li>Adequately identifies source of history or chief complaint</li> <li>Identifies <b>most</b> key components of HPI</li> </ul>	<ul style="list-style-type: none"> <li>Identifies <b>some</b> key components of HPI</li> </ul>
<b>2) History: 1.25 point</b>	<ul style="list-style-type: none"> <li>Other areas of history (Past Medical History, Medications, Allergies, Family History, Social History and Review of Systems) fully addressed including complete past medical history and if applicable inpatient medications</li> </ul>	<p>Other areas of history (CC, Past Medical History, Medications, Allergies, Family History, Social History and Review of Systems) are adequately addressed</p>	<ul style="list-style-type: none"> <li>Identifies <b>some</b> key components of HPI</li> <li>Other areas of history (CC, Past Medical History, Medications, Allergies, Family History, Social History and Review of Systems) are not fully addressed</li> </ul>
<b>3) Physical Exam: 1.25 point</b>	<ul style="list-style-type: none"> <li><b>All</b> key components of physical exam are included</li> <li>Neurologic exam is included with good detail</li> </ul>	<ul style="list-style-type: none"> <li><b>Most</b> key components of physical exam are included</li> <li>Neurologic exam is included with adequate detail</li> </ul>	<ul style="list-style-type: none"> <li><b>Some</b> key components of physical exam are included</li> <li>Neurologic exam is included but limited detail</li> </ul>
<b>4) Laboratory and Investigations: 1 point</b>	<ul style="list-style-type: none"> <li>All relevant known other objective data reported (laboratory, radiological and other test results) listed.</li> <li><b>Note:</b> for test results that are not available, please state which tests are ordered/pending.</li> </ul>	<ul style="list-style-type: none"> <li>Most relevant known other objective data reported (laboratory, radiological and other test results) listed.</li> </ul>	<ul style="list-style-type: none"> <li>Some relevant known other objective data reported (laboratory, radiological and other test results) listed.</li> </ul>
<b>5) Assessment 1.25 points</b>	<ul style="list-style-type: none"> <li><b>All</b> key differential diagnoses are identified with thoughtful and convincing reasoning for their inclusion.</li> <li>Supportive information from pertinent positive and negatives in H&amp;P and objective data included.</li> <li>Demonstrates clear understanding of lesion</li> </ul>	<ul style="list-style-type: none"> <li><b>Most</b> differential diagnoses are identified with some reasoning for their inclusion included.</li> <li><b>Most</b> supportive information from pertinent positive and negatives in H&amp;P and objective data included.</li> </ul>	<ul style="list-style-type: none"> <li><b>Some</b> differential diagnoses are identified with some reasoning for their inclusion included.</li> <li><b>Some</b> supportive information from pertinent positive and negatives in H&amp;P and objective data included.</li> </ul>

	localization and neurologic approach to issue.	• Demonstrates adequate understanding of lesion localization and neurologic approach to issue.	• Demonstrates some understanding of lesion localization and neurologic approach to issue.
<b>6) Plan/ Problem- Based Patient Management: 1.25 points</b>	<ul style="list-style-type: none"> <li>• <b>Excellent</b> and well-prioritized plan</li> <li>• <b>Plan by problem included</b></li> <li>• <b>All</b> considerations are addressed (consultation, education, follow-up, etc.)</li> </ul> <p><b>Convincing</b> evidence that the patient is safe in the short-term and will benefit from the plan in the long-term</p>	<ul style="list-style-type: none"> <li>• <b>Most</b> Short- and long-term management considerations are presented, with <b>good</b> indication that a higher degree of thought and consideration of the big picture for management is indicated</li> </ul> <p>Many aspects of short and long-term management are considered</p>	<ul style="list-style-type: none"> <li>• Short- and long-term management considerations are presented, with <b>some</b> indication that a higher degree of thought and consideration of the big picture for management is indicated</li> </ul> <p>Some aspects of short and long-term management are considered</p>
<b>7) Organization and thought process 0.5 points</b>	<ul style="list-style-type: none"> <li>• <b>Excellent</b> organization and thought process, easy to follow line of reasoning and concise but detailed presentation.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Good</b> organization and thought process. Can generally follow line of reasoning without difficulty. Either or both additional detail/more concise wording needed.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Needs improvement</b> in organization and thought process. Trouble follow line of reasoning and difficulty with clarity of concepts. More detail needed.</li> </ul>

**Oral Presentation:** Each student will be required to make one case presentation and present a discussion of a related subject during didactics sessions.

**Grading:** based on the following criteria (see separate document for more details):

1. Organization of material presented and demonstrating command of knowledge about case
2. Focused with appropriate time (10-15 minutes)
3. Provides main elements of Neurological History and Physical: focused but pertinent negatives and positives presented
4. Differential diagnosis: includes important considerations/good thought process about what is most likely
5. Plan: key elements of plan presented
6. Presentation of related topic well researched and references included
7. Presentation of related topic: material with educational merit
8. Presentations skills: General interaction and communication/eye contact/knowledge of material/appropriately answering questions

**Participation:** This portion of the Neurology Clerkship grade will be based on professionalism during clerkship rotations, general participation in discussions during didactic sessions and completing all requested work including evaluations.

## Formative and Summative Assessments

### Formative Assessments

- In person, mid-clerkship formative assessment will be provided by supervising preceptor.
- Ongoing formative assessments will be provided throughout the rotation by the supervising preceptor and/or resident.

### Summative Assessment

- A final summative assessment will be performed at the end of the rotation. Each preceptor is required to submit a completed end-of-rotation evaluation.
- See Rotation Grading section below for additional details.

## Rotation Grading

Final grades are based on a combination of NBME shelf exam performance, clinical evaluations, and clerkship director assessment. The NBME shelf exam establishes the initial grade tier, which may be adjusted based on clinical and didactic performance.		
#	Components	Notes/Explanation
	NBME shelf exam	
	Preceptor evaluation of performance	See below for Preceptor Evaluation of Student Performance Form that shows questions and assessment rubric.
	Clerkship director assessment	Including performance on required didactic activities, which may include case presentations and write-ups, completion of required assignments, completion of clinical logs

The final clerkship grade reflects both **knowledge and clinical performance**.

- The **NBME shelf exam determines the initial grade tier** (Honors, High Pass, or Pass) based on national percentile performance.
- **Clinical evaluations and clerkship director assessment** are used to adjust the final grade based on observed performance in patient care, clinical reasoning, communication, and professionalism. Professionalism is a core component of clinical performance and may directly impact the final grade.

Strong clinical performance may result in an upward adjustment of the final grade, while deficiencies in clinical performance or professionalism may result in a lower final grade, regardless of exam score.

A high exam score alone does not guarantee a final grade of Honors, and a passing, but lower exam score may be offset by strong clinical performance, at the discretion of the Clerkship Director.

Successful completion of the course is based on the following:

1. Demonstrating professional and ethical behavior
2. Passing the NBME shelf exam ( $\geq$  5th percentile)
  - Students below this threshold may be eligible for a “Quick Retake”
  - Failure of the retake requires formal remediation
3. Demonstrating satisfactory clinical performance
4. Completing required assignments and didactic activities

Failure to meet any of these requirements may result in remediation.

Details of the grading criteria and weighting methodology are outlined in the **M3 Clerkship General Handbook**.

## **Course Policies**

**Students are expected to comply with all CNU and COM policies.**

### **Attendance**

Students are expected to attend all scheduled activities during their clinical clerkships, as full participation and punctual arrival is essential for both professional development and clinical competency. However, we recognize that life events may occasionally necessitate time away from clerkship responsibilities. Refer to [4420 Attendance and Absence Policy](#) for additional details.

Clear, timely communication between the student and the Clerkship Director is essential in managing any episode of absence from clerkship activities.

All missed time must be addressed in accordance with the Attendance Policy. Excused absences may require make-up time, depending on the number of days missed and the clerkship’s duration. Unexcused absences will always require make-up and may carry consequences related to professional conduct. Students are responsible for working collaboratively with the Clerkship Director to develop and complete a make-up plan that ensures all required clinical experiences and educational objectives are fulfilled.

### **Clinical Duty Hours**

Clinical duty hours are designed to support student well-being, patient safety, and effective learning. Refer to [4409 Clerkship Duty Hours Policy](#) for additional details.

Key expectations include:

- **Maximum 80 hours per week**, averaged over four weeks
- **No more than 24 consecutive hours** of clinical duties (with limited additional time for transitions of care)
- **Minimum 10 hours off** between scheduled shifts
- **No more frequent than every 3rd night call**, averaged over time
- **At least one full day off (24 hours) every 7 days**, averaged over four weeks

Students who have concerns about fatigue, safety, or duty hour violations are encouraged to report them to the Clerkship Director or the Office of Medical Education.

### **Use of Artificial Intelligence (AI)**

Use of AI in this course must align with the California Northstate University Artificial Intelligence Use Policy. For more information, please see the [CNU Artificial Intelligence \(AI\) Use Policy](#).

### **Remediation**

Students who do not successfully pass the course (those receiving a grade of “Y” or “F”) will be referred to the Student Promotion Committee (SPC) and a remediation plan will be developed.

### **Remediation Exam Dates**

The dates will be determined by the clerkship director.

### **Student Evaluations of Course, Faculty, and Rotation Site**

Students are required to complete evaluations of the rotation (course), preceptor, and rotation site. The goal for course evaluations is 100% student participation. Evaluations are submitted electronically.

## Appendix

### Detailed Learning Objectives and Assessment Mapping

The following table provides detailed alignment of course objectives with EPAs, program objectives, and assessment methods for accreditation purposes.

Clerkship Learning Outcomes (CLOs)	Educational Program Objectives (EPOs)	AAMC Core EPAs Alignment	Assessment Methods
<p><b>1. Integration &amp; Application of Foundational Knowledge:</b></p> <p>Integrate biomedical, clinical, and social science knowledge to explain disease mechanisms, guide diagnostic reasoning, and apply evidence-based principles to patient care decisions.</p>	<p><b>MSK 2.1-2.5; PC 1.7,1.8</b></p>	<p>EPA 7 – Form clinical questions and retrieve evidence.</p>	<p>Ongoing daily one-to one evaluation of the student by the preceptor.</p> <p>End of rotation one-to-one and written evaluation of the student by the preceptor.</p> <p>National standardized subject (NBME) shelf examination assessing clinical knowledge, diagnostic reasoning, and patient management.</p>
<p><b>2. History Taking, Differential Diagnoses, and Diagnosis:</b></p> <p>Elicit comprehensive, focused patient's history and perform logical, accurate physical examinations to prioritize and justify differential diagnoses through sound clinical reasoning.</p>	<p><b>PC 1.1-1.3, PC 1.5; MSK 2.1, 2.2</b></p>	<p>EPA 1 – Gather a history and perform a physical examination;</p> <p>EPA 2 – Prioritize a differential diagnosis</p> <p>EPA 5 – Document a clinical encounter in the patient record</p>	<p>Ongoing daily one-to one evaluation of the student by the preceptor.</p> <p>End of rotation one-to-one and written evaluation of the student by the preceptor.</p> <p>National standardized subject (NBME) shelf examination assessing clinical knowledge, diagnostic reasoning, and patient management.</p>
<p><b>3. Management, Treatment, and Prevention Plans:</b></p> <p>Develop and justify patient-centered management and prevention plans that include appropriate diagnostic testing, treatment selection, and timely response to urgent or emergent clinical issues.</p>	<p><b>PC 1.6-1.8; MSK 2.2, 2.3; HC 5.1, 5.2</b></p>	<p>EPA 3 – Recommend and interpret diagnostic and screening tests.</p> <p>EPA 4 – Enter and discuss orders and prescriptions.</p> <p>EPA 10 – Recognize a patient requiring urgent care and initiate evaluation</p>	<p>Ongoing daily one-to one evaluation of the student by the preceptor.</p> <p>End of rotation one-to-one and written evaluation of the student by the preceptor.</p> <p>National standardized subject (NBME) shelf examination assessing clinical knowledge, diagnostic reasoning, and patient management.</p>

<p><b>4. Use of Resources &amp; Systems, Healthcare Delivery Systems, and Delivery Systems Improvement:</b></p> <p>Recognize patient safety risks and system-based issues, using principles of quality improvement, resource stewardship, and advocacy to enhance healthcare delivery.</p>	<p><b>HC 5.1, 5.2; RP 6.1-6.3; PC 1.8</b></p>	<p>EPA 13 – Identify system failures and contribute to a culture of safety and improvement</p>	<p>Ongoing daily one-to one evaluation of the student by the preceptor.</p> <p>End of rotation one-to-one and written evaluation of the student by the preceptor.</p>
<p><b>5. Communication with Medical Team and with Patients, Family Members, and Community:</b></p> <p>Communicate effectively, respectfully, and compassionately with patients, families, colleagues and interprofessional team members, demonstrating cultural sensitivity, professionalism, and clarity in both oral and written exchanges.</p>	<p><b>C3.1, 3.2; PC 1.3, 1.4, 1.6</b></p>	<p>EPA 6 – Provide an oral presentation;</p> <p>EPA 8 – Give or receive a patient handover to transition care responsibility</p> <p>EPA 9 – Collaborate as part of an interprofessional team</p> <p>EPA 11 – Obtain informed consent for tests and/or procedures</p>	<p>Ongoing daily one-to one evaluation of the student by the preceptor.</p> <p>End of rotation one-to-one and written evaluation of the student by the preceptor.</p>
<p><b>6. Professionalism:</b></p> <p>Demonstrate integrity, accountability, ethical judgment, and respect in all professional interactions while maintaining a commitment to patient welfare, diversity, and self-improvement.</p>	<p><b>PC 1.6; P 4.1 - 4.4; RP 6.1 - 6.4</b></p>	<p>EPA 8 – Give or receive a patient handover to transition care responsibility</p> <p>EPA 9 – Collaborate as part of an interprofessional team; EPA 12 – Perform safe transitions of care</p> <p>EPA 11 – Obtain informed consent for tests and/or procedures</p> <p>EPA 13 – Contribute to a culture of safety</p>	<p>Ongoing daily one-to one evaluation of the student by the preceptor.</p> <p>End of rotation one-to-one and written evaluation of the student by the preceptor.</p>
<p><b>7. Performance of Basic Clinical Procedures:</b></p> <p>Perform basic clinical procedures safely and competently, while maintaining patient comfort, adhering to infection control standards, and documenting accurately.</p>	<p><b>PC1.2, 1.3, 1.5, 1.7; C3.1, 3.2</b></p>	<p>EPA 12 – Perform general procedures of a physician</p> <p>EPA 5 – Document a clinical encounter in the patient record</p>	<p>Ongoing daily one-to one evaluation of the student by the preceptor.</p> <p>End of rotation one-to-one and written evaluation of the student by the preceptor.</p>

Key: EPO = Educational Program Objective (#1=Patient Care; #2=Medical & Scientific Knowledge; #3=Communication and Interpersonal Skills; #4=Professionalism; #5=Health Care Systems; #6=Reflective Practice and Personal Development)

## Preceptor Evaluation of Student Performance Grading Rubric

Preceptors are expected to complete an evaluation for each student within three weeks of the student's completion of their clinical rotation, using the evaluation questions and grading rubric provided below.

### Q1. How effectively did the student gather essential details during the patient history and perform a thorough, logical physical examination?

Fail	Misses key history elements or physical exam findings; lacks a systematic approach.
Poor	Gathers basic information but omits significant details; H&P is incomplete or inconsistent.
Pass	Obtains most essential information, performs a systematic H&P, minor details may be missed.
High pass	Consistently gathers comprehensive histories and performs thorough, organized physical exams.
Honors	Demonstrates exceptional skill in obtaining H&Ps, even in complex cases.
Not applicable	Insufficient contact

### Q2. How well did the student prioritize and justify potential diagnoses based on the clinical encounter?

Fail	Struggles to develop a differential diagnosis or includes irrelevant possibilities.
Poor	Lists basic differentials but has difficulty prioritizing or justifying them.
Pass	Produces reasonable differential diagnoses with some prioritization and justification.
High pass	Creates well-reasoned, prioritized differentials with strong clinical justification.
Honors	Provides nuanced, prioritized differential diagnoses with exceptional clinical reasoning.
Not applicable	Insufficient contact

### Q3. How effectively did the student develop a sound management plan, including clinical reasoning, recommendation and interpretation of diagnostic tests, treatment selection, recognition of urgent/emergent issues, and justification of their decisions?

Fail	Disorganized plan; poor reasoning; inappropriate or missing diagnostics; misses urgency.
Poor	Basic plan; key gaps in reasoning or diagnostics; urgency often missed.
Pass	Sound plan; logical reasoning; appropriate diagnostics; recognizes urgency.
High pass	Clear, well-reasoned plan; effective diagnostics; manages urgency well.
Honors	Outstanding plan; sharp reasoning; precise diagnostics; expertly addresses urgency.
Not applicable	Insufficient contact

### Q4. How accurately and effectively did the student document clinical encounters (including admission notes, progress notes, procedure notes, outpatient notes, etc.)?

Fail	Documentation is unclear, incomplete, or inaccurate.
Poor	Includes basic information but lacks organization or misses key elements.
Pass	Documents most relevant details accurately and concisely.
High pass	Consistently produces clear, thorough, and well-organized documentation.
Honors	Documentation is exemplary, capturing all relevant details and showing exceptional clarity.
Not applicable	Insufficient contact

**Q5. How well did the student organize, tailor, and deliver oral presentations of clinical encounters?**

Fail	Presentations are disorganized, incomplete, or difficult to follow.
Poor	Basic structure is present, but significant details are omitted or unclear.
Pass	Provides organized, clear presentations with minor omissions.
High pass	Consistently delivers concise, well-structured presentations.
Honors	Excels in presenting, even under pressure, with exceptional clarity and precision.
Not applicable	Insufficient contact

**Q6. How effectively did the student generate clinical questions, retrieve evidence, and integrate medical and scientific knowledge into patient care?**

Fail	Doesn't ask questions or use evidence; relies on flawed reasoning.
Poor	Inconsistent use of questions or evidence; limited application.
Pass	Asks relevant questions; uses and applies evidence appropriately.
High pass	Consistently uses strong evidence and reasoning in decisions.
Honors	Insightful, evidence-driven thinker; integrates knowledge expertly into care.
Not applicable	Insufficient contact

**Q7. How effectively did the student communicate and collaborate with the interprofessional team, including during handoffs and transitions of care, demonstrating clarity, respect, and professionalism?**

Fail	Unclear, unprofessional, or ineffective; poor teamwork.
Poor	Inconsistent or vague; limited collaboration; handoffs lack structure.
Pass	Clear, respectful, and accurate; works well with team; handoffs are adequate.
High pass	Consistently clear and collaborative; effective, well-structured handoffs.
Honors	Excellent communicator and team player; handoffs are seamless and complete.
Not applicable	Insufficient contact

**Q8. How effectively did the student communicate with patients and families from diverse backgrounds, incorporate social and cultural factors into clinical care, and explain risks, benefits, and alternatives to support informed decision-making with clear language and compassion?**

Fail	Ineffective or inappropriate communication; disregards cultural or social factors; fails to support informed decisions.
Poor	Basic communication; limited consideration of diversity or shared decision-making.
Pass	Clear, respectful communication; incorporates social and cultural context; explains options reasonably.
High pass	Consistently effective and culturally sensitive; supports informed, patient-centered decisions.
Honors	Exceptional communicator; deeply integrates cultural awareness and shared decision-making.

**Q9. How competently and confidently did the student perform basic clinical procedures and communicate with patients during the process, while ensuring patient and healthcare team safety?**

Fail	Struggles with procedural skills or patient communication.
Poor	Performs basic procedures but lacks confidence or consistency.
Pass	Safely performs procedures with minor guidance.
High pass	Performs procedures confidently and competently.
Honors	Demonstrates exceptional skill and patient-centered communication during procedures.
Not applicable	Insufficient contact

**Q10. To what extent did the student identify safety risks or system issues in patient care delivery and take appropriate steps to address them? (e.g., *Noticing frequent order entry errors, workflow inefficiencies, or recognizing inconsistent use of interpreter services and advocating for proper language support.*)**

Fail	Misses safety or system issues; may contribute to harm.
Poor	Recognizes issues only when prompted; limited action.
Pass	Identifies issues and communicates appropriately; needs guidance to act.
High pass	Proactively identifies and helps address issues.
Honors	Anticipates risks, acts independently, and leads or contributes to improvements.
Not applicable	Insufficient contact

The Preceptor Evaluation of Student Performance form has been thoughtfully mapped to the specific Course Learning Objectives (CLOs) for each clerkship. The table below outlines how each evaluation question aligns with the relevant CLOs to ensure consistency between assessment and curricular goals.

Evaluation Question	CLOs	EPOs
Q1. History & PE	CLO-2, CLO-1, CLO-6	PC 1.1–1.3, 1.5–1.8; MSK 2.1–2.5; P 4.1–4.4; RP 6.1–6.4
Q2. Differential Dx	CLO-2, CLO-1	PC 1.1–1.3, 1.5, 1.7, 1.8; MSK 2.1–2.5
Q3. Management Plan	CLO-3, CLO-1, CLO-5	PC 1.3–1.8; MSK 2.1–2.5; C 3.1, 3.2; HC 5.1, 5.2
Q4. Documentation	CLO-2, CLO-5, CLO-6	PC 1.1–1.6; MSK 2.1, 2.2; C 3.1, 3.2; P 4.1–4.4; RP 6.1–6.4
Q5. Oral Presentation	CLO-5, CLO-2, CLO-6	PC 1.1–1.6; MSK 2.1, 2.2; C 3.1, 3.2; P 4.1–4.4; RP 6.1–6.4
Q6. Evidence-Based Practice	CLO-1, CLO-4, CLO-5	PC 1.3, 1.4, 1.6–1.8; MSK 2.1–2.5; C 3.1, 3.2; HC 5.1, 5.2; RP 6.1–6.3
Q7. Interprofessional Teamwork	CLO-6, CLO-5	PC 1.3, 1.4, 1.6; C 3.1, 3.2; P 4.1–4.4; RP 6.1–6.4
Q8. Patient/Family Communication	CLO-6, CLO-5	PC 1.3, 1.4, 1.6; C 3.1, 3.2; P 4.1–4.4; RP 6.1–6.4
Q9. Clinical Procedures	CLO-7, CLO-6	PC 1.2, 1.3, 1.5–1.7; C 3.1, 3.2; P 4.1–4.4; RP 6.1–6.4
Q10. Systems/Safety	CLO-4, CLO-5, CLO-6	PC 1.3, 1.4, 1.6, 1.8; C 3.1, 3.2; P 4.1–4.4; HC 5.1, 5.2; RP 6.1–6.4