
AY 2026-2027 Neuroscience Clerkship

Clerkship Contacts

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Clerkship Description

The primary purpose of the Clinical Neuroscience Clerkship offered in the MS III year is to provide the medical student with the ability to perform a neurological interview and examination, interpret signs, consolidate symptoms and signs into syndromes, accurately diagnose neurological diseases, and identify appropriate evidence-based management strategies. The goals and objectives outlined below have been developed internally and are consistent with the neurology core curriculum developed by the Consortium of Neurology Clerkship Directors and the Undergraduate Education Subcommittee of the American Academy of Neurology.

Clerkship Goals and Objectives

- Student must master the basic techniques of a neurologic interview and neurological examination.
- Student must be able to obtain practical information from the interview and neurological examination, and interpret the meaning of every bit of information obtained during the interview and neurological examination.
- At the end of the rotation, the student must be able to integrate data and formulate appropriate statements regarding topographic localization of lesions within the central and peripheral nervous system.

- Student will be able to formulate plans for investigation and management.
- Student must master the knowledge of cardinal manifestation of primary neurologic diseases.
- Student must know the basic neurologic complications of systemic diseases.
- Student will be exposed to principles of geriatric neurology.
- Student will learn utilization of laboratory data to complete a topographic and etiologic diagnosis.
- Student should be able to define pathophysiologic mechanism of disease processes.
- Student should be able to assess prognosis of neurological illnesses.
- Student will identify neurologic emergencies and the need for expert assistance.
- Able to critique latest and milestone research articles.

Patient Care

Goal: The student will develop recognition and effective integration of factors that contribute to optimal and compassionate care of patients presenting with neurological concerns.

Objectives: By the end of the clerkship, students should be able to:

- Obtain a complete and reliable history (PGO 1.1).
- Conduct a focused and reliable neurological examination. (PGO 1.1)
- Formulate a differential diagnosis based on lesion localization, time course, signs, symptoms, and relevant demographic features (PGO 1.3).
- Formulate a plan for investigation and management of common neurological problems (PGO 1.2).
- Discuss neurological manifestations of systemic diseases. (PGO 1.5, 1.3)

Medical Knowledge for Practice

Goal: The student will gain and develop an effective understanding of the assessment and management of common clinical conditions in neurology as they are encountered in the inpatient and outpatient settings. The student will master the expertise necessary to perform a complete neurologic examination. The learner will demonstrate the ability to acquire, critically interpret, and apply this knowledge.

Objectives: The student will recognize the signs, symptoms, and physical findings of neurological problems at the level of an MS III, including the following:

- Stroke
 - Describe the different subtypes of strokes and their etiologies. (PGO 2.2, 2.3)
 - List the major risk factors for stroke. (PGO 2.4)
 - Describe treatment of acute stroke and prevention of recurrent stroke. (PGO 2.3, 1.2, 4.4)
- Epilepsy and Seizures
 - Differentiate between seizures (provoked, unprovoked), epilepsy (focal, generalized), non-epileptic (physiological and psychogenic) and syncope. (PGO 2.1, 2.2, 2.3)
 - Classify seizure sub-types and describe the clinical features associated with these sub-types. (PGO 2.2, 2.3, 1.3)
 - Identify appropriate treatment options for patients with epilepsy including conventional and new antiepileptic agents. (PGO 2.3, 1.2, 1.2)
 - Recognize common adverse events associated with medications for the management of epileptic disorders. (PGO 2.3, 1.2, 6.3)
- Dementia
 - Define and differentiate between dementia and delirium. (PGO 2.1, 2.2, 2.3, 1.3)
 - Generate appropriate differential diagnoses for patients presenting with cognitive problems. (PGO 2.3, 1.3, 1.2)
- Neuromuscular diseases
 - Differentiate between upper motor neuron (UMN) and lower motor neuron (LMN) dysfunction. (PGO 2.2, 2.3)
 - Describe usual clinical features and differential diagnosis of motor neuron disease. (PGO 2.3, 1.3, 1.2)
 - Discuss localization for peripheral sensorimotor disorders (e.g. radicular pain, mononeuropathy, paresthesia, etc.). (PGO 2.2, 2.3)
- Headaches
 - Differentiate primary and secondary headaches. (PGO 2.2, 2.3)
 - Discuss the distinctive clinical characteristics and epidemiology of migraine and its variations. (PGO 2.3, 2.4, 1.3)
- Infectious Diseases
 - Integrate the information received in previous training about concepts on infectious diseases of the nervous system and their treatment, including viral encephalitis, bacterial meningitis, and fungal meningitis. (PGO 2.2, 2.3, 2.4, 1.2, 1.3)
 - Students will review different cerebral spinal fluid changes on different types of infections. (PGO 2.2, 2.3, 1.3)
- Movement disorders
 - Differentiate between hyperkinetic and hypokinetic movement disorders. (PGO 2.2, 2.3)
 - Describe pathological and neurochemical features of idiopathic Parkinson's disease. (PGO 2.3, 1.3)
 - Discuss pharmacological options available for treatment of essential tremor and Parkinson's disease. (PGO 1.2)

Professionalism

Goal: Students who demonstrate a commitment to carrying out professional responsibilities, adhering to ethical principles, displaying sensitivity to a diverse patient population.

OBJECTIVES: Throughout the clerkship students will demonstrate:

- Respect towards patient, families and co-workers whose lifestyles and values may be different from their own (PGO 5.1).
- Ethical behavior, including patient confidentiality (PGO 5.2, 5.5).
- Cultural sensitivity. (PGO 5.1, 5.4)
- Reliability. Arrive on time and be prepared for all required activities. (PGO 5.3, 5.7)
- Honesty and integrity in patient care (PGO 5.1, 5.6).
- Professional appearance. This means the student wears their white jackets with their nametags clearly visible and in business casual attire. Scrubs are only acceptable on inpatient settings. (PGO 5.7)
- *Be actively involved. (No Facebook, texting, talking socially with colleagues or cell phone use, during educational activities). (PGO 5.1, 5.3, 5.7)

Interpersonal and Communication Skills

Goal: The student will develop knowledge of specific techniques and methods that facilitate effective and empathic communication between the learner, faculty, colleagues, staff, and systems.

Objectives: Throughout the clerkship students will demonstrate the ability to:

- Communicate effectively with families and patients (PGO 4.1).
- Appropriately utilize interpreters if necessary to communicate with patients. (PGO 4.1, 4.3)
- Communicate effectively and respectfully with physicians and other health professionals in order to share knowledge and discuss management of patients (PGO 4.2, 4.3).
- Present clear, concise, and thorough oral and written presentations of patient history and physical examination results. (PGO 4.2, 4.4)
- Maintain professional and appropriate personal interaction with patients. (PGO 4.1, 5.2)

Practice-Based Learning & Improvement

Goal: Understand the application of scientific evidence and accept feedback for continuous self-assessment in the improvement of patient care.

Objectives: Throughout the clerkship students will demonstrate the ability to:

- Apply technology (e.g. PDA, PC, Internet) in the acquisition and evaluation of Evidence-Based Medical information (e-medicine, journals, AAFP, NEJM, etc.). (PGO 3.1, 3.4, 3.5)
- Accept feedback from the faculty and incorporate this into improvement of clinical practice (PGO 3.3).
- Critically assess the quality and utility of medical information based on sources and methodologies (PGO 3.2).

System-Based Practice

Goal: Develop an appreciation of supportive health care resources, and understand their utilization as part of patient advocacy.

Objectives: Throughout the clerkship students will demonstrate the ability to:

- Wisely utilize resources in patient care (e.g. efficiently use diagnostic and laboratory tests) (PGO 6.3).
- Understand and utilize ancillary health services and specialty consultants properly (PGO 6.2, 6.4).

Interprofessional Collaboration

Goal: Demonstrate the ability to engage in an interprofessional team in a manner that optimizes safe, effective patient and population-centered care.

Objectives: Throughout the clerkship, students will be able to:

- Use knowledge of one's own role and the roles of other health care professionals to work together in providing safe and effective care (PGO 7.2).
- Function effectively as a team leader and team member (PGO 7.3).

Personal & Professional Development

Goal: Demonstrate the qualities required to sustain lifelong personal and professional growth.

Objectives: Throughout the clerkship, students will demonstrate the ability to:

- Recognize when to take responsibility and when to seek assistance (PGO 8.1)
- Utilize appropriate resources and coping mechanisms when confronted with uncertainty and ambiguous situations (PGO 8.4).
- Demonstrate the ability to employ self-initiated learning strategies when approaching new challenges, problems, etc. (PGO 3.1).

Integration Threads

X Geriatrics	___ Basic Science	X Ethics
X Professionalism	X EBM	X Chronic Illness Care
___ Patient Safety	___ Pain Management	X Clinical Pathology
___ Palliative Care	___ Quality Improvement	___ Clinical and Translational Research
X Communication Skills	X Diagnostic Imaging	X Interprofessionalism

Clinical Conditions

The clinical conditions students will be expected to see and document in the OPLOG patient encounter system are listed above in the section labeled “Medical Knowledge.” Level of involvement for required conditions is assist or manage. See Common Clerkship Requirements. These conditions will be encountered in the following settings:

Outpatient (Clinical Sciences Building-Basement/TTMC)

- General Neurology Clinic
- Parkinson Clinic (Different types of Parkinson's Disease, and deep brain stimulation)
- Epilepsy Clinic (Different types of seizure disorders and their treatment including the use of vagus nerve stimulation)
- Basis of Geriatric Medicine relevant to Neurology (i.e. Dementia, syncope, fall, etc...)
- Headache Clinic

Inpatient (Team meets at UMC/Neurology Conference room)

- General Neurology
- Neurological complications of systemic diseases
- Stroke rounds
- Epilepsy Unit Service

Neuro services will take place in 2 different locations:

- University Medical Center (for the Neuro Inpatient rotation).
- TTUHSC/Texas Tech Medical Clinic/Neurology clinic for Ambulatory weeks (outpatient).

Inpatient Rotation – University Medical Center (UMC)

1 week located at University Medical Center (6 days which includes both day/evening shifts and including 1 weekend day/evening)

During the inpatient Neuroscience clerkship, students are assigned Monday through Saturday (subject to change) inpatient UMC Consultative services.

Student will have a combination of day and evening shifts:

- If you are unable to attend a minimum of 5 consecutive days due to commitments -please plan to switch the rotation to another week as this will not be permissible per Dr. Narvaez.
- Mandatory to attending Morning report at UMC 3rd floor (Neuro ICU) at 07:30 AM when on Day shift.
- Mandatory to attend Noon lectures with the Neurology residents from Noon to 1 PM when on Day shift, except during Wednesday didactics or Neurology Academic Chief or Program director excuses them as the lecture/meeting is irrelevant to the students.
- Neuro/Radiology Case Conference: Mandatory for students to attend this conference on Friday from 7:45 a.m. to 8:45 a.m. This

can be the Neuro/Radiology Case conference, Tumor Board or Grand rounds.

Inpatient Assignments And Assessments:

Assignments:	Due date
1 Inpatient Observed H&P signed by Neuro faculty/resident	by end of the Inpatient week
1 Inpatient Typed H&P	by end of the Inpatient week. Signed note copy/paste into Word document
1 Code Stroke Card	by end of the Inpatient week
OpLogs 5 out of 10 required	by Mid-Clerkship Assessment
DAY SHIFT ASSESSMENTS x 2 REQUIRED	Due date
1 Assessment required by Neuro attending/Coordinator will take care of this assessment	by end of the Inpatient week
1 Assessment required by Senior resident <i>*Assessment completed by PGY-1 and PGY-2 residents will not be accepted*</i>	by end of the Inpatient week
EVENING SHIFT ASSESSMENT	Due date
1 Assessment required from the most senior resident on the team at that time on evening <i>*Assessment completed by PGY-1 and PGY-2 residents will not be accepted*</i>	by end of the Inpatient week
Online Neurological Physical Exam Lecture	by end of the Inpatient week

Ambulatory (5-6 half days) at Texas Tech Medical Clinics

Assignments:	Due date
1 Ambulatory Observed H&P	by around 4th/5th clinic don't wait until the end
1 Ambulatory Typed H&P	by around 4th/5th clinic- don't wait until the end
1 Assessment	Coordinator will take care of getting it after 4th/5th clinic

Additional requirements:

10 Op Logs Entries

Neurology Mid-Clerkship Due at Mid-Clerkship Assessment

5 out of 10 required Op Log entries progress
1 Code Stroke Card
Observed H&P signed by Neuro faculty/resident
Typed H&P
Neuro Inpatient assessments to this point

Clinical Presentations

The following clinical presentations (CPs) from year 1-2 will be revisited during this rotation:

- Movement Disorder (Parkinson's Disease, Huntington chorea, Wilson Disease)
- Dementia
- Gait Disorder
- Headaches
- Vertigo
- Epilepsy
- Stroke

Description of Clerkship Specific Assignments

Please see Appendix D.

Additionally, all students must complete at least 10 new patient evaluations.

If there is the opportunity, students will be able to perform diagnostic lumbar puncture at the Neurology Clinic under supervision.

List of Reading Assignments

Students are encouraged to consult the following material, which is provided at the library:

- Textbook: Aminof MJ, Greenberg DA, Simon RP: Clinical Neurology 9th Ed McGraw Hill
- On Campus: <https://ebookcentral.proquest.com/lib/ttuhsc-elpaso/detail.action?docID=31872826>
- Off Campus: <https://libraryaccess.elpaso.ttuhsc.edu/login?url=https://ebookcentral.proquest.com/lib/ttuhsc-elpaso/detail.action?docID=31872826>
- <https://youtu.be/LsK3vbY9C7I?si=WcdPVBeVetrrj-ZM>
- <https://www.youtube.com/watch?v=TTLrxlkDmms>
- Journal articles:
 - *RAMPART (Rapid Anticonvulsant Medication Prior to Arrival Trial): A double-blind randomized clinical trial of the efficacy of IM midazolam versus IV lorazepam in the pre-hospital treatment of status epilepticus by paramedics*, National Institution of Health.

- *Multiple Sclerosis Risk after Optic Neuritis: Final Optic Neuritis Treatment Trial Follow-Up*, National Institution of Health.
- *Thrombectomy 6 to 24 Hours after Stroke with a Mismatch between Deficit and Infarct*, The New England Journal of Medicine
- *Randomized Trial of Thymectomy in Myasthenia Gravis*, The New England Journal of Medic

Op Log Expectations

Please see [Appendix C](#) for a complete list of required patient encounters.

You will receive an In Progress for your final grade if your Op-Log is not complete by end of clerkship.

Assessments

Mid-Clerkship Feedback:

Assessments will occur on an ongoing basis. You will meet with Neurology Clerkship Director/Assistant Director for Mid-Clerkship feedback. During this meeting, you will receive feedback regarding your performance during your Neurology Inpatient rotation (1 week) and will have the opportunity to provide feedback regarding your experience in the clerkship up to that point. Your assessments, Observed & typed H&Ps, and Op-Logs will be reviewed, so please have them up to date. The Neurology Clerkship Program Coordinator will contact you to schedule your meeting.

Absences:

Please see [Common Clerkship Policies](#).

Grading Policy – In Addition to Common Clerkship Policies The student's final Clerkship grade will be based on their overall clinical and professionalism evaluations and end of block OSCE. Please see the school's grading policy in the Common Clerkship Policies.

Neurology Final Clerkship Assessment

Competency	Components	Source
Patient Care & Procedural Skills	○ Completes an appropriate history. ○ Exam is appropriate in scope and linked to history. ○ Generates a comprehensive list of diagnostic considerations based on the integration of historical, physical, and laboratory findings. ○ Provides preventive healthcare services and promotes health in patients ○ Appropriately documents findings.	Evaluations, Timely Op-Log entries, Observed H&P, Stroke card
Knowledge for Practice	○ Identifies biopsychosocial issues relevant to patient treatment. ○ Can compare and contrast normal variation and pathological states commonly encountered in Neurology. ○ Can independently apply knowledge to identify problem.	Evaluations, Observed H&P, Stroke card
Interpersonal & Communication Skills	○ Communicates effectively with patients and families across a broad range of socio-economic and cultural backgrounds. ○ Presentations to faculty or resident are organized.	Evaluations, Observed H&P, Stroke card
Practice-Based Learning & Improvement	○ Takes the initiative in increasing clinical knowledge and skills. ○ Accepts and incorporates feedback into practice	Evaluations
System-Based Practice	○ Effectively utilizes medical care systems and resources to benefit patient health. ○ Demonstrates understanding of processes for maintaining continuity of care throughout transitions (change in team of providers or transfer in level of care).	Evaluations, Stroke card
Professionalism	○ Is reliable and dependable ○ Acknowledges mistakes ○ Displays compassion and respect for all people. ○ Demonstrates honesty in all professional matters ○ Protects patient confidentiality ○ Dress and grooming appropriate for the setting	Evaluations, Timely OP-log entries
Inter-professional Collaboration	○ Works professionally with other health care personnel including nurses, technicians, and ancillary service personnel ○ Is an important, contributing member of the assigned team.	Evaluations ILP
Personal and Professional Development	○ Recognizes when to take responsibility and when to seek assistance ○ Practice flexibility in adjusting to change and difficult situations	Evaluations

***All competencies graded as: Needs improvement, Pass, or Honors**

Sample Competency Grading Rubric (Sample clinical* factors considered in grading)

Competency	Honor	Pass	Needs Improvement
Medical Knowledge	MS exceeds in the ability to: - Describe in detail main neurological disorders - Apply knowledge to patient care in detail	MS has the ability to: - Describe main neurological disorders - Apply knowledge to patient care	MS has difficulties in: - Knowledge about main neurological disorders - Applying knowledge to patient care
Patient care	MS exceeds in the ability to: - Collect an accurate history - Identifies pertinent physical findings - Formulate a detailed treatment plan	MS has the ability to: - Collect an accurate history - Identifies findings - Formulate a basic treatment plan	MS has difficulties in: - Collecting history from a patient or family interview - Narrowing findings - Formulate a basic treatment plan
Interpersonal Skills and Communication	MS exceeds in the ability to: - Document accurate medical information - Present patients in a thorough and concise manner - Easily develop rapport with the team, patients, and families	MS has the ability to: - Document medical information - Present patients - Develop rapport with team, patient, and families	MS has difficulties : - Working with the team, patients and families - Peer and team conflicts are evident - Difficulty transmitting information
Professionalism	MS exceeds in the ability to: - Have appropriate communication and body language - Be reliable - Take initiative in patient care - Always be punctual - Behave professionally	MS has the ability to: - Have appropriate communication and body language - Be reliable and punctual - Behave professionally	MS has difficulties : - Inappropriate jargon or body language - Frequently tardy or absent - Unreliable - Unprofessional dress - Unprofessional use of phone
Practice-Based Learning and Improvement	MS exceeds in the ability to: - Participate in self-directed learning - Show evidence of reading with critical interpretation - Eagerly collaborate - Contribute to the team and accept feedback in a very positive way - Apply scales or instruments	MS has the ability to: - Participate in self-directed learning - Contribute to the team in acceptable way - Accept feedback - To do scales or instruments	MS has difficulties in: - Accepting feedback - Being self-directed in learning - Showing interest in learning - Completing scales or instruments
Systems-Based Practice	MS exceeds in the ability to: Respect the hierarchy of the team	MS has the ability to:	MS has difficulties in: Functioning in a team

	- Effectively use thorough understanding of health care resources - Advocate for patients - Be an excellent team member - Accurately formulate a diagnosis and treatment plan	- Respect the hierarchy of the team - Use and understand health care resources - Advocate for patients - Be a good team member	- Recognizing and using health care resources - Advocating for patients
Interprofessional Collaboration	MS exceeds in the ability to: - Works professionally with health care personnel - Is an important contributing member of the team - Functions effectively as a team member by preparing for collaborative experiences	MS has the ability to: - Works professionally with health care personnel - Is an important contributing member of the team - Functions effectively as a team member	MS has difficulties in: - Working with health care professionals - Needs to improve contribution - Needs to improve functionality
Personal and Professional Development	MS exceeds in the ability to: - Recognizes when to take responsibility and when to seek assistance - Demonstrates flexibility in adjusting to change - Demonstrates the ability to employ self-initiated learning strategies when approaching new challenges, problems or unfamiliar situations	MS has the ability to: - Recognizes when to seek assistance - Demonstrates flexibility - Demonstrates the ability to employ self-initiated learning	MS has difficulties in: - Accepting feedback - Difficulty in flexibility - Being self-directed in learning

AI Statement for Inclusion in All Syllabi

TTUHSC EP may utilize institution-approved artificial intelligence (AI)-assisted tools to support teaching, learning, and grading processes. AI tools are used to enhance efficiency and consistency; however, they do not replace faculty expertise, professional judgment, or final decision-making authority. Examples of permitted AI-supported functions may include, but are not limited to: assignment completion support where explicitly allowed, verification of submission completeness, preliminary rubric-aligned feedback, similarity checks, scoring assistance, and workflow efficiency improvements. Faculty are responsible for reviewing and verifying AI-generated outputs prior to assigning grades or providing final feedback.

Student use of AI tools (including generative AI platforms) is governed by course-specific guidelines. In some assignments, AI use may be permitted; in others, it may be limited or prohibited. Students are responsible for understanding and adhering to these expectations. Any AI-generated or AI-assisted content must be appropriately disclosed and cited in accordance with course instructions to maintain academic integrity. Failure to follow course AI guidelines may constitute academic misconduct.

Students should be aware that AI-generated content may contain inaccuracies, incomplete information, or embedded bias. Students remain responsible for the accuracy, originality, and integrity of all submitted work.

Faculty retain full responsibility for final evaluation of student performance. Students may request clarification regarding grading processes or feedback and may appeal decisions through established institutional procedures.

Student Resources

Office of Accessibility Services

TTUHSC EP is committed to providing access to learning opportunities for all students with documented learning disabilities. To ensure access to this course and your program, please contact the Office of Accessibility Services (OAS) by calling 915-215-4398 to engage in a confidential conversation about the process for requesting accommodations in the classroom and clinical setting. Accommodations are not provided retroactively, so students are encouraged to register with OAS as soon as possible. More information can be found on the OAS website:
<https://elpaso.ttuhsce.edu/studentservices/accessibility/default.aspx>

Counseling Assistance

TTUHSC EP is committed to the well-being of our students. Students may experience a range of academic, social, and personal stressors, which can be overwhelming. If you or someone you know needs comprehensive or crisis mental health support assistance, on-campus mental health services are available Monday- Friday, 9 a.m. – 4 p.m., without an appointment. Appointments may be scheduled by calling 915-215-TALK (8255) or emailing support.elp@ttuhsc.edu. The offices are located in MSBII, Suite 2C201. Related information can be found at <https://elpaso.ttuhsce.edu/studentservices/student-support-center/get-connected/> Additionally, the National Suicide Prevention Lifeline can be reached by calling or texting 988.

Reporting Student Conduct Issues

Campus community members who observe or become aware of potential student misconduct can use the Student Incident Report Form to file a report with the Office of Student Services and Student Engagement. Student behaviors that may violate the student code of conduct, student handbook, or other TTUHSC policies, regulations, or rules are considered to be student misconduct. This includes, but is not limited to, plagiarism, academic dishonesty, harassment, drug use, or theft.

TTUHSC El Paso Campus CARE Team

The university CARE Team is here to support students who may be feeling overwhelmed, experiencing significant stress, or facing challenges that could impact their well-being or safety. If your professor notices any signs that you or someone else might need help, they may check in With you personally and will often connect you with the CARE Team. This is not about being “in trouble” it’s about ensuring you have access

Medicine and the

to trained professionals who can offer support and connect you to helpful resources. Additionally, if you have any concerns about your own well-being or that of a fellow student, please don't hesitate to reach out to let your professor know. You can also make a referral to the CARE Team using CARE Report Form. Your health, safety, and success are our top priorities, and we're here to help.
