UND SCHOOL OF MEDICINE & HEALTH SCIENCES
UNIVERSITY OF NORTH DAKOTA

Department of Neurology
Phase II Clerkship

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Welcome to your experience in Neurology. This four-week exposure to Neurology will have the following learning opportunities.

1. Learn to perform a complete neurologic examination
2. Gain an understanding of the presentation, evaluation, and treatment of the most common neurologic diseases
3. Complete two patient write-ups, incorporating pertinent neurologic history and examination
4. Develop an understanding for localization of neurologic disease through history and examination

PRECEPTOR ASSIGNMENTS

You will be assigned a preceptor for the four-week rotation. As part of your time in the inpatient clinic, you and your preceptor will choose two patients for you to interview, examine, and present. You will also compose two **formalized write-ups** about these patients to be presented and discussed with your preceptor as part of your overall evaluation. The first write-up will be due at the end of the first two weeks, and the second will be due the Thursday before your shelf exam. You will also partake in didactic lectures, inpatient teaching rounds, and outpatient teaching. The **preceptor evaluation, whereby your clinical performance and formalized write-ups will be assessed, is worth 60% of your final grade**.

NBME EXAM

There are eBooks available at the following links:

- ***Neurology Blueprints***
- ***Case Files: Neurology***

The department is also able to loan you ***Neurology Blueprints*** (Fifth Edition, 2019) and ***Case Files: Neurology*** (Third Edition, 2018) to prepare for the NBME Neurology Subject Exam given on the final day of your four-week rotation. Contact your campus if you would like a hard copy.

- NBME exam will contribute to 40% of your final grade
- Passing score is ≥ 57 Equated Percent Correct
- Each student must achieve a total score of 70 or above in order to pass the clerkship.
- Each student must achieve for the NBME shelf exam a passing total equated percent correct score of 57 or higher. Any student who fails to pass the NBME shelf exam the first time, will retake it for the second time. Third failure requires two-week remediation.
- Any student who does not achieve an overall score of 70 or above will be required to remediate two weeks of neurology.
- Any student who fails to achieve an overall score of 70 or higher after a remediation will automatically receive a failing grade. This can only be erased by repeating an entire four-week clerkship.

HONORS CRITERIA

Honors will be awarded if you meet the following criteria:

- Composite score of 90 or greater

EVALUATIONS

All clerkship evaluations will be completed in Leo. You will receive a link from Leo to complete your required evaluations.

- Student Evaluation of Clerkship
- Student Evaluation of Preceptor

The clerkships are required to track and document student activity, per the LCME, on the following questions through our Student Evaluation of Rotation form. Below are the two questions you will see on the evaluation:

- ***Were you observed doing an H&P while on the rotation?***
  *To accomplish taking an H&P on a patient during your Neurology Clerkship a student will perform **relevant parts** of a history taking or examinations in multiple patients. So you may be observed performing **partial** H&Ps on several patients.*

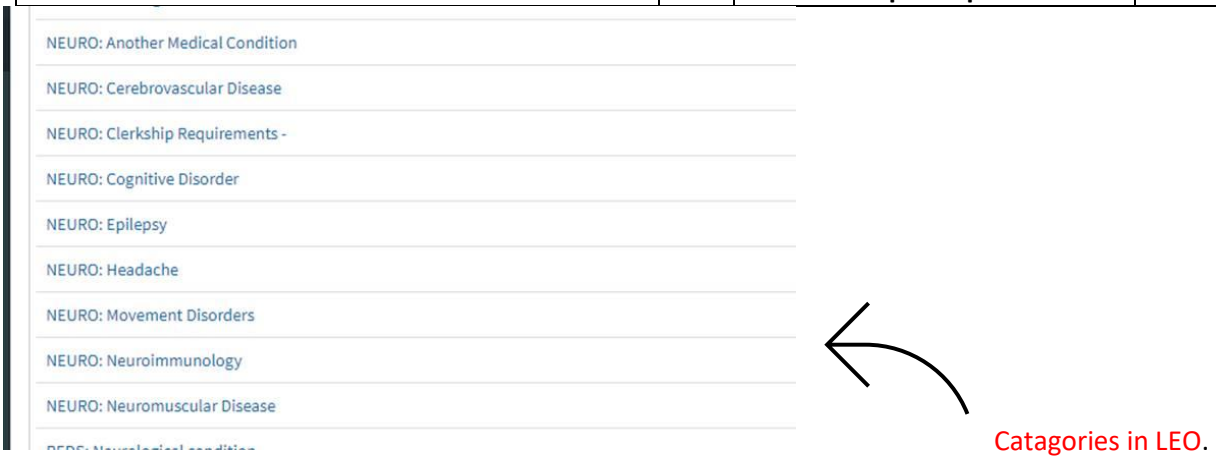
- ***Did you receive written mid-clerkship Feedback while on this rotation?***
  Mid-Clerkship Feedback is scheduled, and the results are provided to each student in Leo.

The Basic Science Clinical Integration Activity

You will be required to take an assessment in Leo after your mid rotation feedback with preceptor. Study activity questions to be prepared for the assessment passing grade is 60% or better, if you should fail you will need to re- take before rotation is over.

REQUIRED CLINICAL CASES

Patient type/clinical condition	#	Student Roles	Check List
Cognitive disorders	1	Students observe or participate with faculty supervision. **Any time spent working with or talking to a patient for any part of an office visit is considered participation.**	
Movement disorders	1		
Epilepsy	1		
Neuromuscular disease	1		
Headache	1		
Cerebrovascular disease (Stroke)	1		
Neuro-immunology (Multiple sclerosis)	1		



Catagories in LEO.

LOGGING CLINICAL CASES

You are **required** to log at least one **participated** clinical case from each of the above categories in Leo and **are also required to log at least 40 patients into your Leo Neurology clerkship.** Only log a patient as observed if you were not involved in any way with the patient examination and/or did not speak with the patient.

Your log entries will be reviewed at midterm and reflected on your midterm feedback in Leo. You will also be notified via email of any deficiencies in clinical logs by your clerkship coordinator.

If you are not able to participate in one of the required clinical patient types, you will be required to review information in **Case Files Neurology, 3rd Edition (2018)** and log that encounter as an **Alternate Activity** in Leo.

You will be provided with a *Required Case Encounters Log* to keep track of the patients you see each day. This is due to your clerkship coordinator on the day of your NBME exam and is in addition to the log entries completed in Leo.

WRITE UPS (Bismarck, Minot, Fargo, and Grand Forks Students)
For the first half of your rotation, select the most interesting case you have seen; work with your preceptor on making this decision. Follow the format for a Neurology Write-up (see example at the end of this syllabus). Arrange time to review with your preceptor. Email the final copy to your campus coordinator. For the second half of your rotation, follow the same method for your second case write-up. Email to your campus coordinator before taking your shelf exam.

PROFESSOR ROUNDS
Professor Rounds are done once a week during the clerkship, usually by the Clerkship Director. The Director will be filling out an Oral Presenting Case Rating Scale (OPCRS) Form on the student presenting the patient. You will not be graded on these rounds only critiqued, and they are not included in your overall Neurology grade. These rounds are designed to improve your history and physical presentation skills. The forms will be generated on Leo.

Suggested Reading and Viewing

Day	Neurology Blueprints, 3rd Edition (2019) Case Files Neurology, 3rd Edition (2018)	Web Lectures
Week 1		
(Monday)	NB Ch. 1, 2, & 3	
(Tuesday)	NB Ch. 4, 5, &6	Visual Disturbance – Dr. Dane Breker
(Wednesday)	NB Ch. 7, 8, & 9	
(Thursday)	NB Ch. 10, 11, & 12	Dementia - Dr. Rebecca Callier Headaches - Dr. Eugeniu Muntean
(Friday)	NB Ch. 13, 14, & 15	Seizures - Amanda Diamond, M.D. Stroke - Matthew Roller, M.D.
(Saturday)	NB Ch. 16, 17, & 18	Common Neuromuscular Diseases - Dr.Jau-Shin Lou Movement Disorders - Dr. Tanya Harlow

(Sunday)	NB 19, 20, & 21	Neurotransmitters - Dr. Ravinda Samaraweera Brain Tumors – Dr. Adam Jackson
Week 2		
(Monday)	NB 22, 23, & 24	Multiple Sclerosis – Dr. Susan Scarberry
(Tuesday)	NB Ch. 25 & Questions 1-50	
(Wednesday)	NB Questions 51-100	
(Thursday)	Review NB	
(Friday)	CFN Movement Disorders (cases 1-6)	
(Saturday)	CFN Trauma (cases 7-8)	
(Sunday)	CFN Altered Mental status (cases 9-10)	
Week 3		
(Monday)	CFN Stroke (cases 11-13)	
(Tuesday)	CFN Seizure (cases 14-17)	
(Wednesday)	CFN Headache (cases 18-19)	
(Thursday)	CFN Dementia (cases 20-24)	
(Friday)	CFN Infection (cases 25-31)	
(Saturday)	CFN Cranial nerve disorders (cases 32-37)	
(Sunday)	CFN Motor disorders (cases 38-43)	
Week 4		
(Monday)	CNF Pediatric neurology (cases 44-51)	
(Tuesday)	CFN tumors (cases 52-53)	
(Wednesday)	CFN miscellaneous (cases 54)	
(Thursday)	Review	
(Friday)	AM Shelf exam, PM free	

1. The reading and viewing materials are tools for you to learn neurology.
2. The questions in the Shelf exam are comparable to those in Step II
3. There will be down time during the day in hospital or at clinic. Make good use of the down time to read.
4. **You will impress a faculty member if you read the chapters in their specialty area the night before you are working with her/him.**
5. Web lectures can also be found at: **https://med.und.edu/neurology/clerkship.html#d21e84-4**
6. Other study material from Library Resources at UND SMHS include:
    a. The **Access Medical suite from McGraw Hill** includes **AccessNeurology**, a focused collection of online reference works, study and self-assessment tools, case files, and multimedia features to enhance student learning.
    b. A **library of reference eBooks** including the most current editions of many works.
    c. **Multimedia Presentations** including an Interactive Neuroanatomy Atlas.
    d. Ready to use cases including patient presentation, case review and tips for exam prep. Check it out here
    e. The suite also includes **USMLS First Aid eBook Cluster.**

2025-2026
Neurology Clerkship Answer Sheet (Blueprints)
Name: Date:

Chapters	Questions	Answers	Comments	Chapters	Questions	Answers	Comments
3	V1.1			18	V1.1		
	V1.2				V1.2		
7	V1.1				V2.1		
	V1.2				V2.2		
	V1.3				V2.3		
8	V1.1			19	V1.1		
	V1.2				V1.2		
	V1.3				V1.3		
10	V1.1				V2.1		
	V1.2				V2.2		
	V1.3				V2.3		
11	V1.1			20	V1.1		
	V1.2				V1.2		
	V1.3				V1.3		
12	V1.1				V2.1		
	V1.2				V2.2		
	V2.1				V2.3		
	V2.2			21	V1.1		
13	V1.1				V1.2		
	V1.2				V2.1		
	V1.3				V2.2		
14	V1.1			22	V1.1		
	V1.2				V1.2		
	V1.3				V1.3		
	V2.1			23	V1.1		
	V2.2				V1.2		
	V2.3				V1.3		
15	V1.1				V2.1		
	V1.2				V2.2		
	V2.1				V2.3		
	V2.2			24	V1.1		
16	V1.1				V1.2		
	V1.2				V1.3		
	V2.1				V2.1		
	V2.2				V2.2		
17	V1.1			25	V1.1		
	V1.2				V1.2		
	V1.3				V1.3		

Questions	Answers	Comments	Questions	Answers	Comments	Questions	Answers	Comments
1			34			67		
2			35			68		
3			36			69		
4			37			70		
5			38			71		
6			39			72		
7			40			73		
8			41			74		
9			42			75		
10			43			76		
11			44			77		
12			45			78		
13			46			79		
14			47			80		
15			48			81		
16			49			82		
17			50			83		
18			51			84		
19			52			85		
20			53			86		
21			54			87		
22			55			88		
23			56			89		
24			57			90		
25			58			91		
26			59			92		
27			60			93		
28			61			94		
29			62			95		
30			63			96		
31			64			97		
32			65			98		
33			66			99		
						100		

NEUROLOGY WRITE-UPS

I. HISTORY

A. Chief Complaint – stated in patients own words when possible

B. History of Present Illness - Patient's age, handedness, race, sex, and why they are being seen. Use all available sources (patient, family, medical records, etc.). Factual and focused chronological narrative of the neurological problem(s). Include a detailed description of the neurological symptom(s) and dysfunction (e.g., onset and evolution; character and severity; location and extension; associated complaints; aggravating and alleviating factors; remissions and exacerbations, treatments, and effects). Record pertinent positives and negatives from review of systems, social and family history.

C. Past Medical History – Include all surgical and medical history including surgeries, hospitalizations and medical illnesses treated in the clinic setting. Allergies.

D. Medications – List all current medications and other pertinent medications that have been discontinued.

E. Social History – Marriage status, work, tobacco, and alcohol use among other items.

F. Family Medical History - Medical history for primary relatives and other relatives where pertinent. Pay particular attention to family history of similar disease processes.

G. Review of Systems – Generally will include multiple different organ systems with careful attention to neurologic review of systems and those that are the most pertinent.

II. PHYSICAL EXAMINATION

A. General Appearance – Habitus, demeanor, lateral neglect, mannerisms/tics.

B. Vital sings –

C. Cardiovascular – Heart sounds, murmurs, carotid bruits.

D. Lung – Breath sounds, respiratory effort

E. Extremities – Edema, discoloration, deformities.

III. NEUROLOGICAL EXAMINATION

A. Mental Status – Level of consciousness and attention. Orientation to person, place, and time. Language function including comprehension, repetition, and naming. Calculations, praxis, and visual spatial deficits. Memory – immediate, recent, and remote. Judgment. Quantify mental status using mini-mental status testing, if appropriate.

B. Cranial Nerves:

- I – Olfaction (typically not test – no need to document)
- II - Visual acuity and fields; fundi (disk, vessels, retina).
- III, IV, VI - Pupillary size (mm), shape and reactivity (light and accommodation); lid position; extraocular movements; nystagmus.
- V - Corneal reflexes; facial sensation (3 divisions); jaw movements.
- VII - Facial movements (nuclear vs. supranuclear); taste (anterior 2/3 of tongue); retro aural sensation.
- VIII - Hearing (e.g., finger rubbing, watch). If indicated: Weber and Rinne, Barany maneuver, caloric responses.
- IX, X - Palate; swallowing; voice, cough.
- XI - Sternocleidomastoids; trapezii.

- XII - Tongue (shape, bulk, strength, involuntary movements).

C. Motor examination -- Bulk; tone; adventitious movements; strength (quantify by the 0-5 scale); fatigability; fine finger movements; involuntary movements.

D. Reflexes – Muscle stretch reflexes: jaw; biceps; triceps; brachioradialis; patellar; ankle. Babinski signs: up, down, no movement or equivocal.

E. Sensory examination: Primary sensory modalities: Pinprick, light touch, and vibration and others as indicated. "Cortical": Double simultaneous stimulation; graphesthesia; stereognosis; two-point discrimination.

F. Coordination -- Finger-to-nose; heel-knee-shin; rapid alternating movements.

G. Station and Gait -- Base, posture, and stability; stride; balance; arm swing; toe, heel and tandem; turns.

III. ASSESSMENT and PLAN

A. Assessment -- What is your diagnosis and differential diagnosis? How have you localized the lesion and what pertinent facts from the H&P led you to this conclusion?

B. Plan -- How do you plan to work this up further and how are you going to treat the patient's illness