



Department of Neurology MS3 Clerkship

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Welcome to your experience in Neurology. This two-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 a patient write-up, 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 two-weeks, as part of your time in the inpatient clinic, you and your preceptor will choose a patient for you to interview, examine, and present. You will compose a **formalized write-up** about this patient to be presented and discussed with your preceptor as part of your overall evaluation. The **preceptor evaluation**

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is worth 60% of your final grade. You will also partake in didactic lectures, inpatient teaching rounds, and outpatient teaching.

NBME EXAM

The department will loan you **Neurology Blueprints** (Fifth Edition, 2019) and **Case Files: Neurology** (3rd Edition, 2018) to prepare for the NBME Neurology Subject Exam given on the final day of your two-week rotation.

- 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 one-week remediation.
- Any student who does not achieve an overall score of 70 or above will be required to remediate one week 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 two-week clerkship.

HONORS CRITERIA

Honors will be awarded if you meet the following criteria:

- NBME score of $>$ or $= 84$
AND
- Preceptor Evaluation $>$ or $= 84$

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.

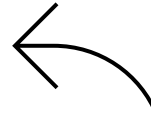
The Basic Science Clinical Integration Activity

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		

NEURO: Another Medical Condition
NEURO: Cerebrovascular Disease
NEURO: Clerkship Requirements -
NEURO: Cognitive Disorder
NEURO: Epilepsy
NEURO: Headache
NEURO: Movement Disorders
NEURO: Neuroimmunology
NEURO: Neuromuscular Disease
NEURO: Neurological Conditions



Categories in LEO.

LOGGING CLINICAL CASES

You are **required** to log at least one **participated** clinical case from each of the above categories in Leo. **But will be required to log at least 20 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 UP (Grand Forks Students)

Select the most interesting case you have seen by Wednesday of the first week, working with your preceptor. Follow the format for a Neurology Write-up. Arrange time to review with your preceptor. Email Jennifer Fournier the final copy.

WRITE UP (Bismarck Students)

Select the most interesting case you have seen by Wednesday of the first week, working with your preceptor. Follow the format for a Neurology Write-up. Arrange time to review with your preceptor. Email campus coordinator the final copy.

CASE PRESENTATIONS (Fargo Students)

Select the most interesting case you have seen and prepare an 8-10 minute power point for presentation of the case and discussion. Please review the selected case with your preceptor both as part of your preceptor’s evaluation and to discuss any relevant teaching points.

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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 E*Value.

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Suggested Reading and Viewing

Day	Blueprints Neurology	Web Lectures
Week 1		
(Monday)	Ch. 1, 2 & 3	
(Tuesday)	Ch. 4, 5 & 6	Visual Symptoms and Dizziness - Susan Scarberry, M.D.
(Wednesday)	Ch. 7, 8 & 9	
(Thursday)	Ch. 10, 11 & 12	Dementia - Michael Sharland, Ph.D. Headaches - Cynthia Knutson, M.D.
(Friday)	Ch. 13, 14 & 15	Seizures - Amanda Diamond, M.D. Stroke - Matthew Roller, M.D.
(Saturday)	Ch. 16, 17 & 18	Movement Disorders - Tanya Harlow, M.D.
(Sunday)	Ch. 19, 20 & 21	Multifocal Neurologic Disease - Rebecca Caillier, M.D.
Week 2		
(Monday)	Ch. 22, 23 & 24	Neuromuscular Disorders - Richard C. Bailly, M.D.
(Tuesday)	Ch. 25, Questions 1-50	
(Wednesday)	Questions 51-100	
(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. The “passing score” for the Shelf is set at 1% this year.
4. There will be downtime during the day in hospital or at clinic. Make good use of the down time to read.
5. **You will impress a faculty member if you read the chapters in their specialty area the night before you are working with her/him.**
6. Web lectures above can also be found at: <https://med.und.edu/neurology/clerkship.html#d21e84-4>

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Neurology Clerkship Answer Sheet (Blueprints)

Name:

Date:

Chapter s	Questions	Answers	Comments	Chapter s	Question s	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		

THE NEUROLOGY WRITE-UP

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 signs** –
- 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