Neurology Clerkship Orientation

Loyola University Stritch School of Medicine
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LOYOLA UNIVERSITY CHICAGO STRITCH SCHOOL of MEDICINE

Welcome to your Neurology Clerkship !

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Student Coordinator, Hines VA:	Candice Bellinder Bldg 228 (Psych Bldg), Rm 5029, Hines VA	708-202-2844

Neurology Clerkship Orientation

1. All of the information discussed here is available on the Neurology Clerkship webpage found on-line under LUMEN, including some educational resources.

2. See the Educational Coordinator after this orientation is over, to complete paperwork and obtain schedules and yellow patient log cards.

3. Report to your first assignment, whether outpatient clinic or an inpatient service, according to your schedule. If you start with an inpatient service, page the assigned resident for a place to meet.

Neurology Objectives

1. All learning objectives are listed in the clerkship webpage, and all exam questions are directly linked to these objectives. Thus, the learning objectives are a framework or guide in studying for the clerkship exams.

2. It is expected that you will encounter at least one inpatient or outpatient with each of these clinical diagnoses or syndromes during this clerkship:

    Dizziness/Abnormal Gait or Balance
    Focal Weakness or Numbness
    Headache or Regional Pain
    Impaired Consciousness or Sleep Disorder
    Seizure or Abnormal Movements
    Visual Changes
    Dementia/Memory/Cognitive Loss
    Delirium/Acute Mental Status Change

3. Since no one will ever see every neurological disease in a 4 week clerkship, learning how to evaluate a patient having these “generic” syndromes is your major goal, as well as whether any symptoms require emergent attention.

Neurology Objectives (see webpage for details):

Medical knowledge

Patient care

Interpersonal and Communication Skills

Practice Based Learning and Improvement

Professionalism

Systems Based Practice

Inter-professional Collaboration

Personal and Professional Development

Clinical Patient Care - 1

During this four week clerkship, students will work with Neurology residents and attendings in the hospital and clinic. Students primarily assigned to Loyola will spend one week on each of the following:

- Clinical Stroke Service (admissions and consults on stroke patients)
- General Neurology Service (admissions and consults on non-stroke patients)
- Outpatient Clinic or Pediatric (inpatient and clinic) Neurology
- Neurointensive Care Service or Night Call (4-10 PM, Mon through Fri)

Students primarily assigned to Hines VA will spend two weeks on each of the following:

- Inpatient Ward/Consult Service
- Outpatient Clinic/Clinical Neurophysiology Lab

All students on hospital (not outpatient clinic) service rotations are to make weekend rounds with their resident/attending team on Saturday or Sunday. (Decide with your colleagues who comes Saturday, and who comes Sunday.) There is no overnight call for students (those rotating on the Night Call week finish by 10 PM).

Clinical Patient Care - 2

A resident or attending will “assign” patients to students, whom the students see and examine on a daily basis, and present and discuss with the team on rounds. If not already performed by the on-call resident, the student may be asked to perform the initial history-and-physical (H&P) or inpatient consultation for that patient. Patients are similarly assigned in outpatient clinic. Diagnostic and therapeutic plans are made under supervision of the responsible attending, and you are encouraged to read about each patient’s syndrome or problem.

A major goal of this clerkship is for students to demonstrate their ability to perform a screening neurological physical examination. A videotape of this examination is available on the Neurology Clerkship webpage under “Educational Resources.” Each student logs in three (3) patients which they examined under direct observation, perhaps best done in outpatient clinic. See the “Direct Observation Instructions” on the webpage. Failure to log in three observed examinations will generate a “meets with concerns” competency rating. Residents or attendings will also verify direct observation of each student obtaining key components of one (1) patient history.

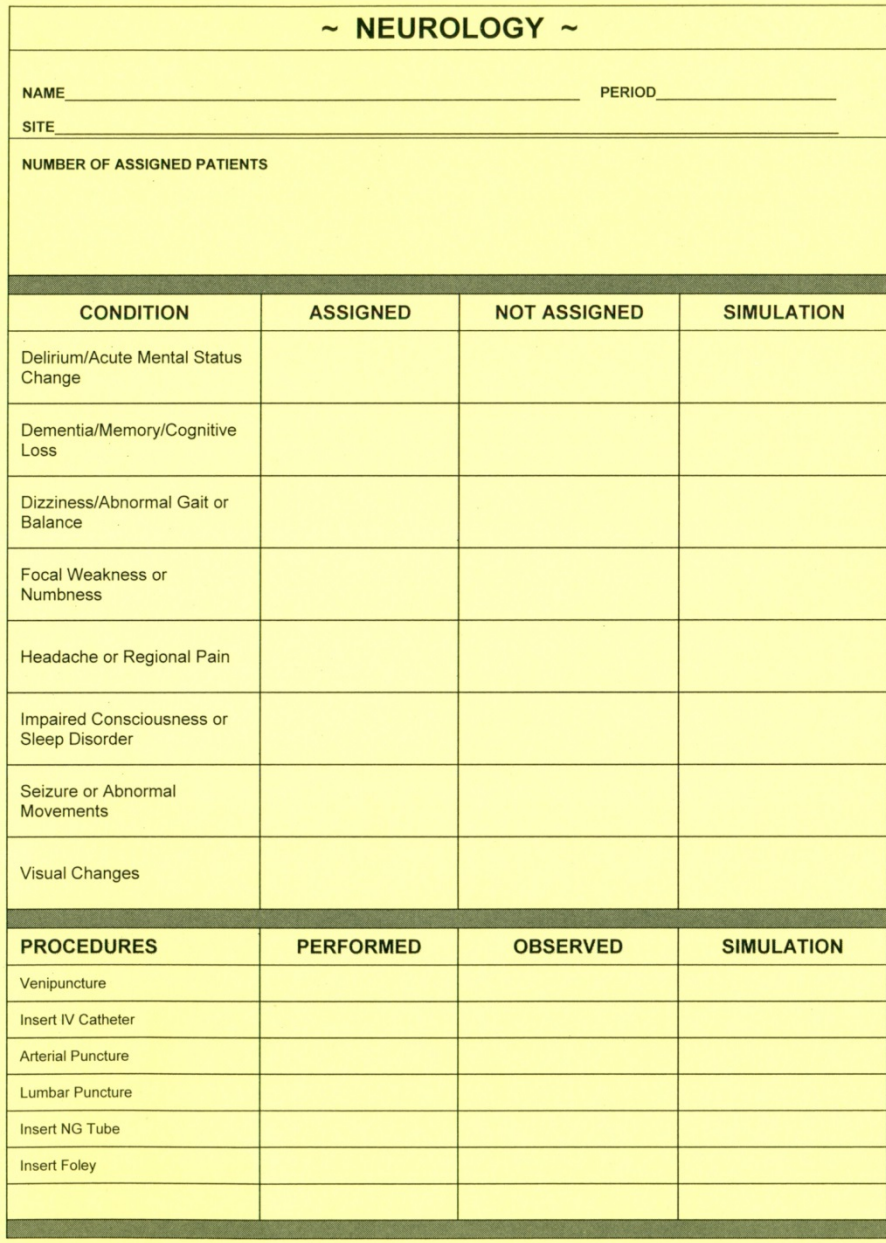
Clinical Patient Care - 3

Students are expected to see a variety of patients in hospital and clinic, and are required to record or "log" these patient diagnoses on their yellow pocket cards, later transferring this patient information to the student's personal on-line log. Students will be reminded to do so if entries fail to appear on-line. During this clerkship, every student should see at least one patient with each of the following generic conditions or syndromes:

---delirium/acute mental status change
---dementia/memory/cognitive loss
---dizziness/abnormal gait or balance
---focal weakness or numbness
---headache or regional pain
---impaired consciousness or sleep disorder
---seizure or abnormal movements
---visual changes

Clinical Patient Care - 4

The syndrome(s) or condition(s) of your assigned hospital or clinic patients should be entered in the "Assigned" column of your yellow card, then transferred to your on-line log. Since each patient may have more than one generic syndrome, please keep a separate tally of the "number of Assigned Patients" at the top of the yellow card. Students on wards or consult service will see, discuss, and learn about all service patients on daily team rounds, so any "Not Assigned" patients should also be recorded with the appropriate syndromes on the yellow card and then on-line log. (Always ask another student's assigned patient permission to examine them, if they have interesting findings on neurological exam, since this will advance your clinical skills.)



~ NEUROLOGY ~

NAME_____ PERIOD_____

SITE_____

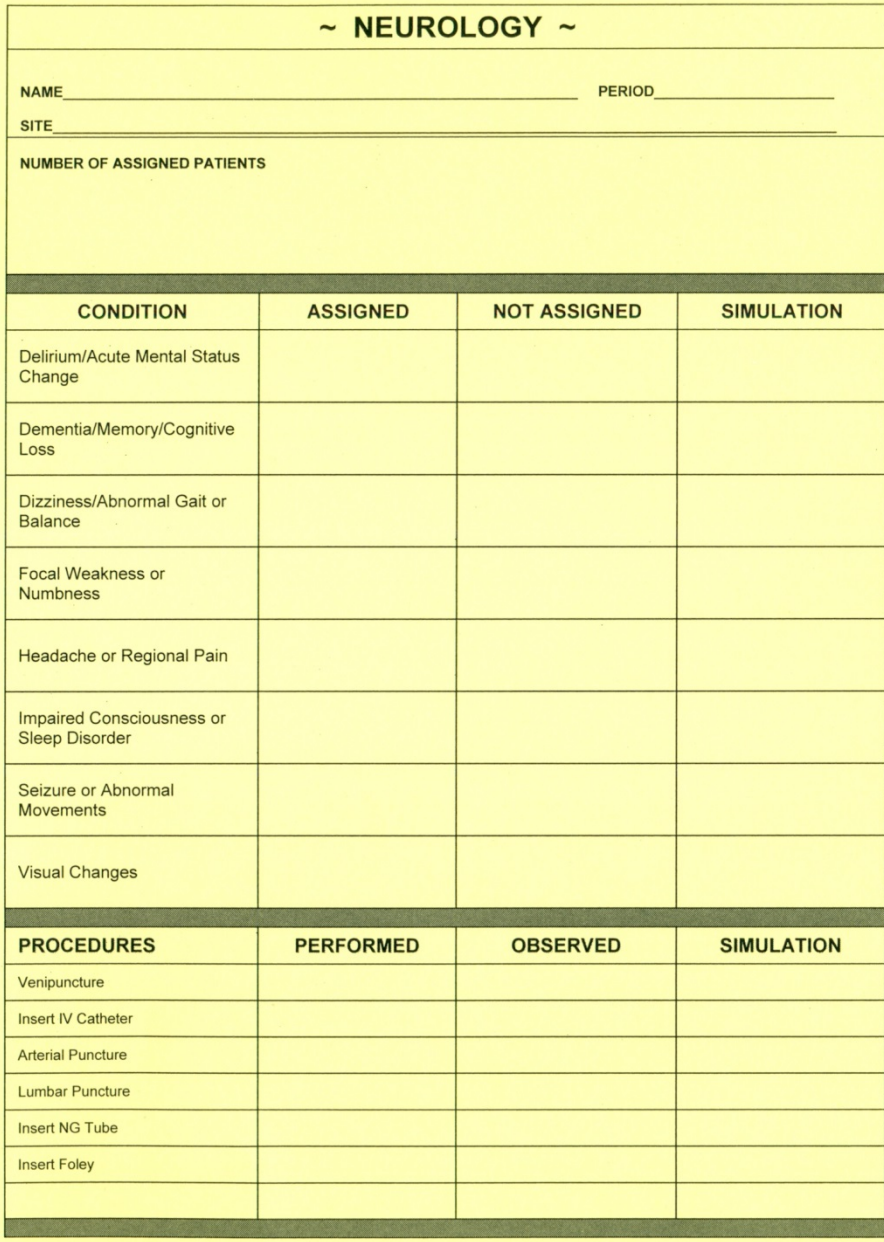
NUMBER OF ASSIGNED PATIENTS

CONDITION	ASSIGNED	NOT ASSIGNED	SIMULATION
Delirium/Acute Mental Status Change			
Dementia/Memory/Cognitive Loss			
Dizziness/Abnormal Gait or Balance			
Focal Weakness or Numbness			
Headache or Regional Pain			
Impaired Consciousness or Sleep Disorder			
Seizure or Abnormal Movements			
Visual Changes			

PROCEDURES	PERFORMED	OBSERVED	SIMULATION
Venipuncture			
Insert IV Catheter			
Arterial Puncture			
Lumbar Puncture			
Insert NG Tube			
Insert Foley			

Clinical Patient Care - 5

If none of your patients has one of these "must see" generic syndromes several days into the clerkship, please view a videotaped "simulation" patient instead. Look up that syndrome in Study Guide 1 for the Practical Neurology DVD Review, under Educational Resources on the clerkship webpage, and choose a videotaped case to see. Mark that syndrome as a "Simulation" on the yellow card and on-line log. Practical Neurology DVD Review, a compilation by Dr. José Biller of over 100 videotaped patients, is accessible through the clerkship webpage. Study Guide 2 for the Practical Neurology DVD Review categorizes the videotaped patients according to final diagnosis (e.g., multiple sclerosis). ***"Meets with concerns" competency ratings will be given for failure to log in a patient or simulation for each of these "must see" syndromes.***



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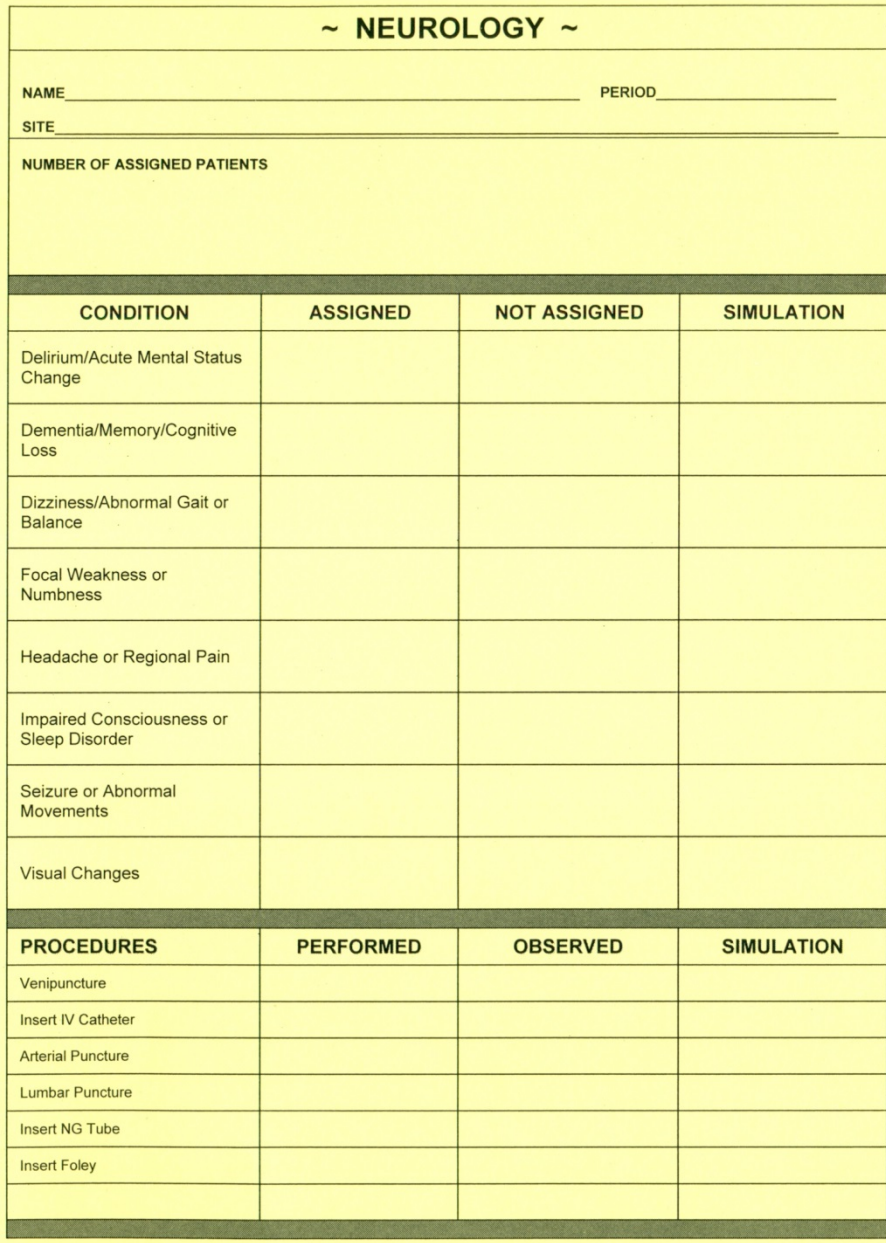
Visual Changes			

PROCEDURES	PERFORMED	OBSERVED	SIMULATION
Venipuncture			
Insert IV Catheter			
Arterial Puncture			
Lumbar Puncture			
Insert NG Tube			
Insert Foley			

Clinical Patient Care - 6

If you perform or observe any of the procedures listed on the yellow card, this should also be recorded and logged on-line. It is unlikely that every student will have the opportunity to perform a lumbar puncture on this clerkship. Therefore, lecture and simulation teaching on this procedure will be provided in this clerkship, and every student should at least record a “Simulation” for lumbar puncture.



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Student Evaluations & Grading -1

Expectations of Neurology Clerkship Students

1. Actively participate in patient care in the hospital and outpatient clinic, maintain a log of patients and procedures, and achieve relevant clinical competencies.

2. Supplement this clinical experience by also studying videotaped actual patients, loosely referred to as "simulated" cases. A case vignette final exam (25 multiple-choice, on-line questions) on 12 of these cases from Practical Neurology DVD Review will be given at the end of the clerkship.

3. Achieve the Neurology Clerkship Learning Objectives (see webpage).

4. Attend all case-based student sessions, including the Lumbar Puncture Workshop, where a simulated lumbar puncture is performed.

5. Pass a 100 question, multiple-choice, case-based, on-line examination and the case vignette exam (see above). Submit student feedback on the clerkship (failure to do so: "meets with concerns" for Professionalism).

Student Evaluations & Grading -2

The attending neurologist working with each student will complete his/her on-line clinical competency evaluation form, when that rotation ends (weekly at Loyola, every 2 weeks at Hines). For outpatient clinic, students will be informed which attending is to fill out their form. For the Night Call rotation at Loyola, the last resident working with the student will fill out their evaluation. Students are to make on-line requests to these assigned attendings to complete their forms. The attending can be selected by a drop-down list according to the site (Loyola or Hines) and service (e.g., Neuro ICU). When selecting the resident for an evaluation of Night Call, choose "Loyola" without a specified service, to see all the residents listed on that drop-down list.

The clinical evaluations for the first 2 weeks of the clerkship are counted in the calculation of your final grade. The assistant clerkship director will meet with each student to review these evaluations in a mid-clerkship feedback session. Be sure to **indicate that you did receive this mid-clerkship feedback when you fill out the student feedback form after the clerkship ends**.

Student Evaluations & Grading -3

For each clinical competency, evaluators will select one of five descriptors for each student. For grade calculations, each descriptor is weighted from 1 to 5 points (descriptors in the extreme left column “no capacity to act” are 1 point, while descriptors in the extreme right column “safe in teaching capacity” are 5 points). Descriptors of “no capacity to act” from two or more attendings will be reported as “does not meet expectations” for that competency, while “no capacity to act” from one attending leads to a “meets with concerns” for that competency. Each evaluation form will be scored as the percentage of points achieved out of the maximum number of points possible, serving as a component in calculation of the final grade. The on-line student profile also includes written comments from attendings/residents.

An example of the clinical evaluation on-line form follows:

NEUROLOGY CLERKSHIP

PC2 - Gather essential and accurate information about patients and their condition through history, physical examination, and the use of laboratory data, imaging, and other tests (2.1)

No Capacity to Act	Safe with Direct Observation	Safe with Direct Observation	Safe with Indirect Observation	Safe in Teaching Capacity
Information unreliable, omissions, disorganized approach	Limited prioritizing of findings, incorrectly performing physical exam maneuvers	Information with some omissions, connecting information to existing factual knowledge, demonstrates patient centered information gathering	Prioritizes information, with most pertinent positives and negatives, performs basic physical exam maneuvers correctly	Gathers focused information in urgent, emergent or consult setting, identifies alternative sources of information

PC4 - Interpret laboratory data, imaging studies, and other tests required for the area of practice (2.1)

No Capacity to Act	Safe with Direct Observation	Safe with Direct Observation	Safe with Indirect Observation	Safe in Teaching Capacity
Unable to interpret data	Provides list of standard labs/imaging, unable to prioritize/provide rationale for ordering	Provides initial plan for lab/imaging, targeted to working diagnosis, occasionally misinterprets data, may fail to recognize urgency of abnormalities	Consistently interprets data accurately, provides rationale for each test	Identifies urgent values without assistance, provides clear rationale for recommendations

PBLI1,5 - Identify strengths, deficiencies, and limits in one's knowledge and expertise, Incorporate feedback into daily practice (4.1, 4.3)

No Capacity to Act	Safe with Direct Observation	Safe with Direct Observation	Safe with Indirect Observation	Safe in Teaching Capacity
No insight/reflection into limitations, does not recognize when help required	Defensiveness with feedback, limited incorporation into practice	Solicits feedback, can recognize self limitations, some incorporation of feedback into daily practice (transient change in behavior)	Routinely solicits feedback, actively reflects, recognizes limitations, appropriately requests help	Routinely reflects on suboptimal practices, makes positive behavior changes

ICS1 - Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds (3.2)

No Capacity to Act	Safe with Direct Observation	Safe with Direct Observation	Safe with Indirect Observation	Safe in Teaching Capacity
Does not engage family or patient, inattentive to needs	Unidirectional communication, mostly template based, respects patient preferences when told, avoids difficult conversations	Actively engages patient and family in discussions, avoids medical jargon, will solicit and respect patient preferences	Adapts to patient's situational needs, uses different techniques (teach back) to ensure understanding	Actively engages family and patient in shared decision making, bidirectional communication

ICS2 - Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health-related agencies (see also interprofessional collaboration competency (IPC) 7.3) (3.3/7.3)

No Capacity to Act	Safe with Direct Observation	Safe with Direct Observation	Safe with Indirect Observation	Safe in Teaching Capacity
Fails to communicate with other team members (does not answer page, etc)	Communication rigid, little insight into situation, avoids difficult conversations	Active listener, engages team members (including supervisor), Discusses plans, keeps team up to date on activities	Can participate in unfamiliar situations, engages others, even with difficult conversations	Effective communicator with difficult/uncomfortable conversations

P1 - Demonstrate compassion, integrity, and respect for others (5.1)

No Capacity to Act	Safe with Direct Observation	Safe with Direct Observation	Safe with Indirect Observation	Safe in Teaching Capacity
Disrespectful interactions, does not tell truth, generates conflicts	Needs to be reminded of proper conduct, difficulty modifying behavior, especially with stress/fatigue	Demonstrates professional conduct, tells truth, respectful interactions	Remains professional with stress and fatigue, does not need reminders to modify behavior	Professional conduct in all circumstances, understands own triggers for lapses

Student Evaluations and Grading -3

Exam Day is the last day of the clerkship. Your patient care and service duties end at noon of the day before Exam Day. On Exam Day, students will take two on-line examinations: (1) a patient case vignette videotape examination, and (2) a 100 multiple-choice question test.

The **patient case vignette videotape exam** consists of 25 on-line, multiple choice questions pertaining to 12 videotaped patients from the Practical Neurology DVD Review. One hour is given for this test, which constitutes a standardized clinical skills exercise, testing analysis and interpretation of signs and symptoms. Please bring your earphones for this test.

The **100 question examination** consists of written patient cases or scenarios, in National Step Exam (Boards) format, some accompanied by CT or MRI images, patient graphics or EEG tracings. Three hours is given for this test, which covers the major aspects and diseases of Neurology detailed on the webpage. All questions for both of these exams are linked to the Neurology Clerkship Learning Objectives.

Student Evaluations and Grading -4

The final Neurology Clerkship grade is calculated as follows:
40% of grade = 100 multiple-choice question exam score
20% of grade = patient case vignette video exam score
40% of grade = clinical evaluations weekly at Loyola (10% each), OR clinical evaluations every 2 weeks at Hines VA (20% each)

(An Incomplete grade is given for a score under 60% on the 100 multiple-choice question exam. Retaking this exam a month later and scoring 60% or better changes the final grade to Pass, while a repeat score under 60% creates a Failure grade, with remediation arranged by the Clerkship Director and Educational Deans.)

Total final clerkship grades of 90.0-100 points are Honors (H), 84.5-89.9 points are High Pass (HP) and 60.0-84.4 points are Pass (P). A final grade less than 60 points will be remediated at the discretion of the Clerkship Director and Educational Deans.

After completing the final examinations, you have two weeks to submit an on-line evaluation of the clerkship. A comment under "Concerns" for Professionalism in your profile will appear if you do not give this feedback.

Educational Sessions and Resources-1

The patient videotaped cases from the Neurology DVD Review available on the Neurology Clerkship webpage in LUMEN may not be accessible with older browsers. Here are some self-help options depending on the students' setup at home or Loyola:

- Use Internet Explorer to view the site if you do not have Microsoft Edge.
(Instructions: https://www.wikihow.com/Open-Internet-Explorer)

- Use Microsoft Edge and open the site in an Internet Explorer tab.
(Instructions:
https://www.itprotoday.com/windows-server/how-quickly-open-internet-explorer-pages-microsoft-edge-windows-10)

- Use Firefox with this plugin:
https://addons.mozilla.org/en-US/firefox/addon/ie-tab/ (Visit this link while in Firefox. Instructions are on the link)

- Use Chrome with this plugin:
https://chrome.google.com/webstore/detail/ie-tab/hehijbfgiekmjfkfjpbkbammjbdenadd
(Visit this link while in Chrome. Instructions are on the link)

- If you have Safari and the videos do not work, use Chrome or Firefox instead

If you need help accessing the Biller DVD Videos on the Neurology LUMEN website, please bring your laptop/device you are using to:

Scott Stubenvoll
CALL Lab – Room 256 (available daily from 8:00 AM to 4:00 PM)
708-216-1644 sstuben@lumc.edu

Educational Sessions and Resources-2

Check your calendar for scheduled **Patient Case Discussions**, some of which include a sampling of patients from the Neurology DVD Review, asking you about the significance of the findings you see, including CT and MRI imaging.

Neurology Grand Rounds occurs weekly and covers a variety of topics.

The **LP Workshop** reviews the indications, contraindications and technique of lumbar puncture, allowing you to perform a simulated LP.

Clinical Neurology Topics are condensed PDF files on essential Neurology topics. Please supplement this by reading a Neurology textbook of your choice. A recommended one is:

Simon RP, Greenberg DA, Aminoff MJ. Clinical Neurology. 7th (or 8th) ed. Lange Medical Books/McGraw Hill: 2009 (or later)

Self-learning modules on the webpage are also available for your independent study.

Educational Sessions and Resources-3

Review questions in the Neurology DVD Review are at the resident or attending level, so you can avoid them. The following videotaped patients are either rare or complex, and are NOT required viewing for this clerkship:

Case	Diagnosis of Patient
22	Alien Hand Syndrome 2^{o} to Left Frontal/Callosal Infarction
25	Anterior Opercular Syndrome (Foix-Chavany-Marie)
40	Takayasu's Arteritis
51	Spinal Myoclonus/Carcinoma of the Ovary
67	Adie's Tonic Pupil/Ross Syndrome
80	Cerebrotendinous Xanthomatosis
89	Tuberous Sclerosis Complex
97	Conversion Disorder (Meige Syndrome)
98-102	Clinicopathological Correlations

Please independently study the **Neuroradiology Curriculum**, which contains MRI imaging of normal anatomy, as well as MRI and CT imaging of various pathologies such as hemorrhage, infarction, brain edema and others.

The **Syndrome-Based Clinical Approach for Medical Students** provides a guideline for assessing the generic patient syndromes or conditions discussed earlier.

LOA & Other Student Policies

1. The clinical rotation in Neurology is only four weeks long, so student absence affects not only the learning experience, but the ability of each attending to evaluate student clinical skills. Students who are absent due to illness or an emergency should call the Educational Coordinator, and fill out an absence form later. A request for a planned leave of absence must be submitted one month prior to the start of the clerkship to the Clerkship Director, Educational Coordinator, and Office of Loyola-Stritch Student Affairs. Requests are evaluated on an individual basis, and may not all be granted. Absent days will be made up or remediated at the discretion of the Clerkship Director.

2. The last day of the clerkship is the date of the final examinations, which cannot be changed since on-line exams are given in a secure room.

3. Student abuse, whether physical, psychological or sexual, is never to be accepted or tolerated. Students are asked to confidentially discuss any issues of abuse, as early as possible, with the clerkship director.

4. You are expected to be in the vicinity of the hospital until 5:00 PM each week day, and should not leave for the day if rounds are completed earlier. New patient admissions or consultations may occur later in the afternoon. Any "down time" should be spent on reading or using the on-line self-study resources mentioned.

The End